UMASS/AMHERST
312066 0282 4013 6

Digitized by the Internet Archive
in 2014

https://archive.org/details/ffy1986massachus00mass

MASS. HS30.2: T53/986-987

FFY 1986

MASSACHUSETTS

TITLE V MATERNAL AND CHILD HEALTH SERVICES BLOCK GRANT:

DESCRIPTION OF INTENDED EXPENDITURES AND STATEMENT OF ASSURANCES

To The Secretary, United States
Department of Health and Human Services

From the Commonwealth of Massachusetts

Michael S. Dukakis
Governor

Philip Johnston
Secretary
Executive Office of Human Services

Bailus Walker, Jr., Ph.D., M.P.H.
Commissioner
Department of Public Health

Contact Person:

October 1, 1985

Bernard Guyer, M.D., M.P.H.
Director, Division of Family
Health Services
Massachusetts Department of
Public Health
150 Tremont Street
Boston, MA 02111
(617) 727-3372

PUBLICATION #14,266-164-100 12-85-CR
APPROVED BY: Daniel Carter, State Purchasing agent

TABLE OF CONTENTS

Page

I. EXECUTIVE SUMMARY 1

II. INTRODUCTION 7

- A. Federal Legislative Base 7
- B. State Legislative Base 8
- C. Agency Description 8

III. DESCRIPTION OF INTENDED EXPENDITURES AND STATEMENT OF ASSURANCES (Section 505) 18

- (1) INTENDED USE OF PAYMENTS 18
  - (A) Populations, areas and localities in need of MCH services 18
    - 1. Population Indicators 22
    - 2. Health Status Indicators 43
    - 3. Service Indicators 75
    - 4. Relating Needs Assessment to Program Location 91
  - (B) Statement of Goals and Objectives 99
  - (C) Types of services provided, number and characteristics of individuals served and program data collected 111
  - (D) Data Collection Activities 133
- (2) ASSURANCES TO THE SECRETARY 142
  - (A) : Fair Method for Allocating Funds 142
    - Guidelines and Quality Assurance 154
  - (B) : Restriction of funds to purpose of Title V and prohibitions against discrimination 155
  - (C)(i) : Expenditure of "substantial" proportion of Title V funds for services and special consideration for special projects 155
  - (C)(ii) : Expenditure of "reasonable" proportion of funds for improved access, prevention and SSI-DCP 156
  - (D) : State charges/financial eligibility 156
  - (E) (i-iii) : Interagency coordination 156
  - : Public comment 160

IV. REPORTS AND AUDITS (Section 506) 161

V. PAYMENTS TO THE STATES/MATCHING (Section 503) 162

I. EXECUTIVE SUMMARY

In compliance with the 1981 amendments to Title V of the Social Security Act, which created the Maternal and Child Health (MCH) Services Block Grant, the following document describes Massachusetts' intended use of MCH Block Grant funds in FFY'86, beginning October 1, 1985. As in prior years, this document addresses the entire Massachusetts MCH program, administered by the Department of Public Health's Division of Family Health Services, and thus also covers state funded programs, the federal Special Supplemental Food Program for Women, Infants and Children (WIC), and programs or initiatives funded through other federal grants.

While the remainder of this document presents information on the broad array of Division-supported programs addressing the needs of women, children and their families in Massachusetts, the Executive Summary highlights some of the major issues and priorities which will shape Division programs in FFY'86 and beyond. Thus, the Summary addresses areas where the Division anticipates new, altered or expanded roles in the coming years. Special attention will be focused on these areas as the Division continues to strive to provide a comprehensive, well integrated program that promotes the health of families in the Commonwealth. Many of the priorities identified in prior years' documents, while not discussed again here, continue to demand attention.

Before proceeding to a discussion of the areas of infant mortality, services for the handicapped and chronically ill, nutrition, reproductive health, and violence, the Executive Summary begins with a brief description of the fiscal context within which the Division will be functioning in FFY'86

Fiscal Context

Over the past few years, the Division of Family Health Services has expanded significantly, with total funding from all sources roughly doubling between FFY 1982 and FFY 1985. While some of this increase is due to transfer of existing programs to the Division, much of the increase can be explained by the recognition of and commitment to addressing family health needs at both the state and national levels. Although funding levels still make it difficult for the Division to keep pace with inflation in many program areas, additional dollars in the past few years targeted to address specific needs have allowed the Division to initiate some new programs and expand others.

In FFY'86, the Division anticipates a total budget of close to $60 million, with $9.2 million from the state share of the MCH Block Grant, $26 million from the federal WIC program, approximately $23 million in state funds, and the remainder from other federal sources including P.L. 89-313 education funds, Preventive Health and Health Services Block Grant funds for women's health services and MCH Block Grant funds for special projects.

While Congress was instrumental in providing additional federal funding for both the MCH Block Grant and WIC in FFY'83 and in maintaining higher levels of funding in FFY'84 and FFY'85, proposals for FFY'86 funding are inadequate to maintain existing services. Level-funding is thus far proposed for MCH, which would not keep up with increasing costs due to inflation and cost-of-living adjustments. The cost of maintaining some services initiated with FFY'83 supplemental MCH Block Grant funds has already been picked up by the state. Massachusetts has stepped in with supplemental state funds for the WIC program, although this state funding was intended to increase and not merely maintain the WIC caseload. With state funding, the WIC caseload was increased by 15,000 over the course of FFY'84. For FY'86, the state has appropriated an additional $1 million for WIC, but federal funding proposed by the administration (which is below the amount authorized for FFY'85) would result in cutbacks in service.

Thus, despite its significant accomplishments in the past few years, and the range of family health needs that continue to go unmet, the Division appears to be facing an extremely tight, if not inadequate, budget in the next fiscal year. The state continues to exhibit its commitment to family health services, and has expanded funding in FY'86 to address infant mortality. Strengthened federal commitment in FFY'86 and future years will be needed if the Division is to maintain and build upon existing programs to address critical health problems confronting women, children and their families in the state. This commitment must be evidenced not only in adequate funding levels for the MCH Block Grant and WIC, but also for Medicaid, Food Stamps, Aid to Families with Dependent Children and other health, nutrition and human services programs which also address the needs of the vulnerable groups to whom the Division's services are targeted. Reductions in these programs tend to be reflected in increased need for the Division's services and ultimately, in long-term costs resulting from increased and more severe health problems.

Reduction of Low Birthweight and Infant Mortality

This area has been identified as a priority in the last two years. While significant accomplishments have occurred, these achievements have laid the groundwork for further challenges and major tasks in the coming years.

In FFY'85, the Division staffed a Department of Public Health-appointed Task Force on Prevention of Low Birthweight and Infant Mortality. The Task Force report, "Closing the Gaps: Strategies for Improving the Health of Massachusetts Infants," was released in May, 1985, and the Division will be responsible within the Department of Public Health for working with other state agencies, health professionals, planners, providers, advocates, legislators and citizens for refining, further developing and implementing the recommendations of the Task Force.

Chaired by former U.S. Surgeon General Dr. Julius Richmond, the 19-member Task Force found that while Massachusetts has made significant progress in reducing infant mortality and compares favorably with most other states and the nation, gaps in rates of low birthweight and infant mortality among vulnerable populations and the population as a whole exist. Specifically, black and Hispanic, low-income and adolescent women were found to have consistently higher rates of poor birth outcomes, and the communities in which these groups are concentrated also evidence high rates compared to the state as a whole. The report also found gaps in resources and services needed to address the problems of low birthweight and infant mortality, and noted that these gaps most directly affected the high-risk groups identified. The Task Force made recommendations in five broad areas, including: targeting resources to identified high-risk groups and communities; ensuring that maternity care services are affordable for all; ensuring that comprehensive services are readily accessible, particularly to high-risk groups; ensuring that all women of childbearing age are informed about factors contributing to healthy babies and the availability of services; and strengthening ongoing monitoring of infant health status and needs. Some of the findings of the Task Force are incorporated in the section of this document which describes the need for MCH services, and its recommendations are incorporated as strategies in the Goals and Objectives section. (Copies of the Task Force report are available.)

The Task Force emphasized the importance of reducing the incidence of low birthweight in order to achieve further progress in preventing infant deaths. It emphasized the importance of maintaining and expanding existing effective programs, including Maternal and Infant Care (MIC) prenatal projects and the WIC program. At the same time it stressed the development of new and innovative approaches and the need for a comprehensive approach. Statewide standards for comprehensive prenatal care, new models for delivery of such care, expanded outreach and education, and payment for maternity care of the estimated 6,000 uninsured pregnant women in the state were some of the specific new strategies suggested. Tailoring and targeting to high-risk groups would be aided by support for community-based coalitions, strengthened regional planning and training and recruitment of personnel representative of and sensitive to the needs of high-risk groups, according to the Task Force.

The state legislature has funded many of these proposals for FY'86, incuding expansion of the MIC prenatal programs, a statewide outreach campaign, support for local and regional coalitions, and development of prenatal care standards. In addition, the state budget includes $6 million for the Department of Public Welfare to provide prenatal and delivery care for uninsured pregnant women in the state.

Reassessment of the Division's Role in Meeting the Needs of the Handicapped and Chronically Ill

This area has also been identified as a priority in the last two years, due to the convergence of a number of issues and trends. Inflation in the costs of providing clinic services for handicapped children combined with lack of information about the extent and nature of service needs, led the Division to join collaboratively with Children's Hospital and the Harvard School of Public Health to assess the Division's Services for Handicapped Children system and develop recommendations for change. Project Serve, directly funded with a MCH Special Project (SPRANS) grant, will be entering its third and final year in FFY'86. Data collection and analysis is nearly complete, and recommendations and alternative options will be developed and presented in the coming year. The results are likely to have implications for all aspects of the Services for Handicapped Children system, including case management, community services and early intervention, as well as for the role of SHC within the Division, and in relation to other state and federal programs.

As the Division considers and evaluates the recommendations emerging from Project Serve, it will attempt to address other emerging areas of concern in regard to the handicapped, particularly its role in addressing the needs of adults with disabling conditions. With advances in medical technology and availability of sophisticated care in recent decades, individuals with disabling conditions originating early in life are now surviving into adulthood. This development was not foreseen or planned for when Title V Crippled Children's Services were created 50 years ago. Additionally, there are few resources or programs to address the health needs of individuals with adult-onset disorders. Finally, individuals suffering from traumatic head injuries also have emerged as a group with unmet service needs.

The Division has been participating in a number of interagency efforts to address the needs of some of these populations, as well as the needs of children. The Division has been looked to for its expertise in addressing the needs of the head-injured, developmentally disabled young adults, individuals with genetic diseases, and children with medical needs being served in the school system.

The challenge to the Division in FFY'86 and coming years will be to join with other agencies to develop strategies, services, policies and resources to meet these identified needs, and to adapt its mission, role and organization to assist in meeting the needs.

Improvement of Nutritional Status in High-Risk Populations

In addition to its commitment to reaching as many eligible women, infants and children with WIC program benefits as possible, the Division now has a state mandate to identify and develop strategies to address needs related to nutrition. With the establishment of the Office of Nutrition, and the reactivation of the Massachusetts Nutrition Board, the Division presently has the vehicles needed to accomplish this mandate.

The challenge in FFY'86 will be to carefully lay the groundwork for future development of the Office as a statewide locus for ongoing study and analysis of nutritional status and problems, for promotion of improved and better coordinated nutrition-related services, and for formulation of nutrition policies and standards. Development and implementation of an ongoing nutrition surveillance system will be a major priority. Short- and long-term goals and objectives for the Office as well as for the Massachusetts Nutrition Board will be developed. The Board, composed of 9 state agency and 9 gubernatorial appointees, offers an excellent mechanism for addressing state nutrition policies and services with a broad and comprehensive approach.

Addressing Women's Gynecological and Reproductive Health Needs

This area is emerging as a priority area for attention. The Division now has responsibility for the Women's Health Program, which historically has been able to devote only limited attention to gynecological and reproductive health concerns. The major program in this area is the Diethylstilbestrol (DES) education and diagnostic service program. Recommendations that the Division devote attention and resources to these needs have emerged from Block Grant Public Hearings, the Family Health Services Advisory Council, and the report of the Task Force on Prevention of Low Birthweight and Infant Mortality.

The Women's Health Program will be collecting information on problems and needs in these areas and working with other Division programs and outside advisors to develop preliminary recommendations to address them. The Division would then attempt to identify the resources needed to implement recommendations. Improved gynecological and reproductive health services, particularly for low-income women and women of color, would clearly not only benefit women, but also would serve as a means of primary prevention of poor reproductive outcomes.

Prevention of Violence-Related Morbidity and Mortality

The Division introduced this issue as an emerging priority area in last year's Block Grant plan. As the state and the nation have achieved much success in reducing morbidity and mortality due to disease-related causes, accidents, homicides and suicides have emerged as leading causes of death and disability, particularly among children and adolescents. Integration of the Women's Health Program into the Division has provided expertise and resources in the areas of family violence and sexual assault. Public comment, through the Family Health Services Advisory Council and Block Grant Public Hearings, has reinforced the need to address violence as a public health issue of major importance.

In beginning to assess its role in this area, the Division will be seeking advice from professionals, providers and the public. The experience of the Division's adolescent and women's health providers, as well as the results of a study of 1985 child and adolescent deaths, should prove particularly valuable in informing a policy analysis and planning process. The Division has successfully carried out research and demonstration projects in the area of prevention of accidental injuries, and is beginning a MCH special projects-funded initiative to implement successful strategies statewide. In exploring its role in violence-related morbidity and mortality, the Division would again look to public health strategies, including research, education and technical assistance as vehicles for prevention.

In conclusion, this summary has highlighted some of the major challenges which the Massachusetts MCH program will be addressing in FFY'86 and future years. The remainder of the document describes the entire Division of Family Health Services Program, including essential services and initiatives that are ongoing but not addressed in this summary.

II. INTRODUCTION

A. Federal Legislative Base

The 1981 amendments to Title V of the Social Security Act created the Title V - Maternal and Child Health (MCH) Services Block Grant. The purposes of the MCH Block Grant are to enable the states:

1. to assure that mothers and children, especially those with low income or limited availability to health services, have access to quality health services.
2. to emphasize preventive measures, such as those to reduce infant mortality and prevent handicapping conditions, and to promote the health of mothers and children through primary pediatric and prenatal care.
3. to provide rehabilitative services to blind and disabled children eligible for Supplemental Security Income (SSI) under the Social Security Act.
4. to provide comprehensive services to handicapped children.

To these purposes, the Title V - MCH Services Block Grant combined the funding from formerly categorical health care programs into the "consolidated health program," including:

- Title V formula grants for Maternal and Child Health (MCH) and Services to Handicapped Children (SHC)
- Supplement Security Income for Disabled Children Program (SSI-DCP) (section 1615(c) Social Security Act)
- Lead-based paint poisoning prevention programs (section 316, PHS Act)
- Sudden Infant Death Syndrome (SIDS) (section 1121, PHS Act)
- Adolescent Pregnancy Grants (Title VI, Health Services and Centers Amendments of 1978)
- Genetics Grants (National Genetic Diseases Act)*
- Hemophilia treatment centers (section 1131, PHA Act)*

* To be funded from the portion of the block grant "set aside" at the federal level by the Secretary of Health and Human Services.

The MCH Block Grant legislation provided for continuity with past state Title V programs by specifying that the state health agency would be responsible for administration of the programs. The purpose of this document is to describe how the Commonwealth of Massachusetts intends to manage Maternal and Child Health Services during the fifth year of the Block Grant, FFY 1986.

B. State Legislative Base

Under the provisions of Chapter 347, Acts of 1936, General Laws of Massachusetts, the Commonwealth is authorized to accept and expend the funds of the Social Security Act, and the Commissioner of Public Health is authorized to carry out the provisions of Title V. In compliance with this legislative mandate, the Department established the Division of Family Health Services. As a result of subsequent amendments to Title V, other federal initiatives, and its state appropriation, the Division currently administers the following major appropriations:

- Federal Maternal and Child Health Block Grant funds, including funds for SSI-DCP, Adolescent Pregnancy, Lead Poisoning Prevention, SIDS, and Block Grant funds set aside at the federal level for "Special Projects of Regional and National Significance" (SPRANS);

- Federal Special Supplemental Food Program for Women, Infants, and Children (WIC) funds;

- State Family Health Services accounts;

- Federal P.L. 89-313 funds for early intervention programs;

- Federal funds for rape crisis services allocated from the Preventive Health and Health Services Block Grant for this purpose;

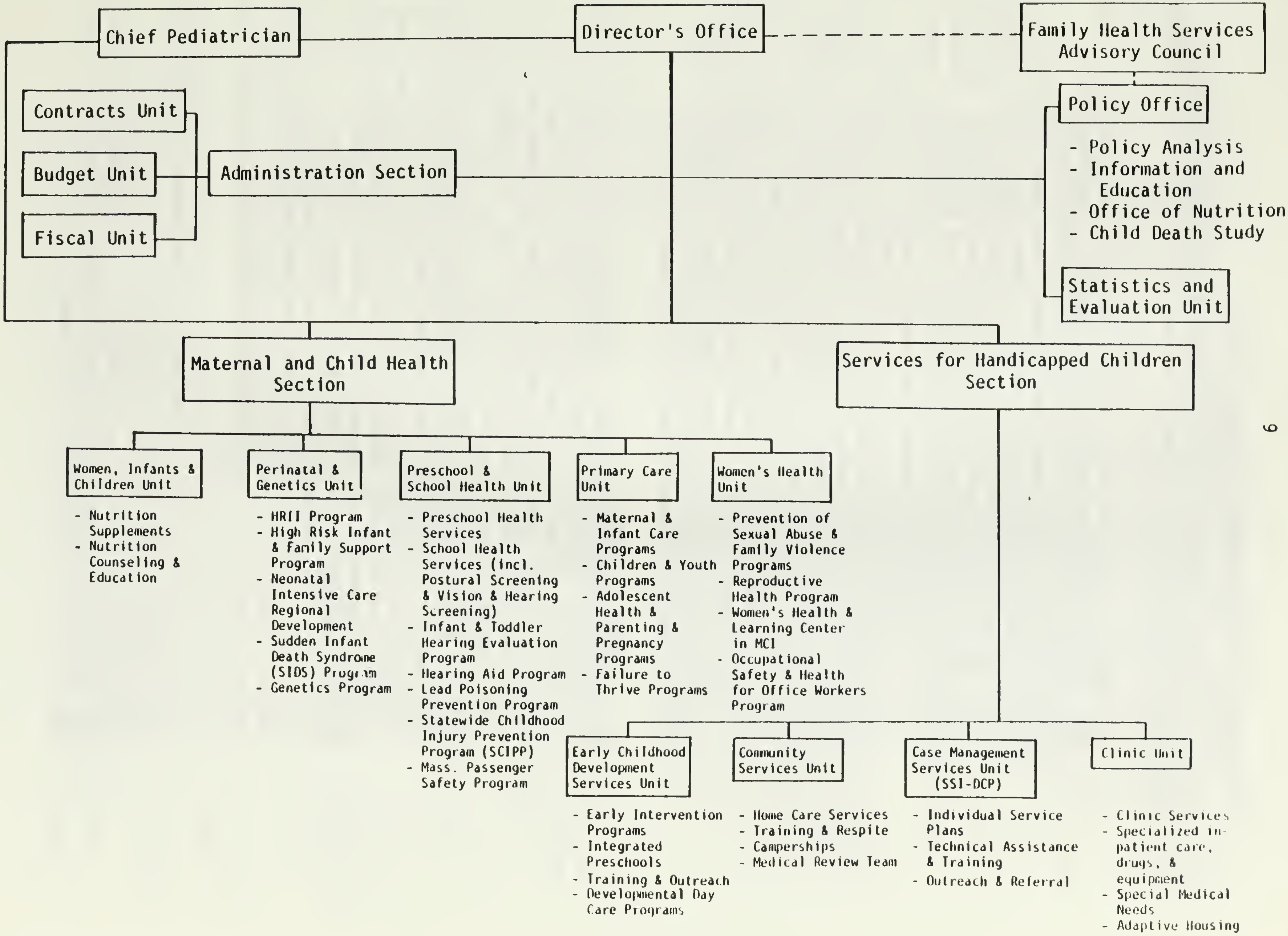
- Federal Department of Transportation funds administered through the Governor's Highway Safety Bureau for transportation injury prevention programs.

C. Agency Description

The Division of Family Health Services has been organized into three sections for the purposes of carrying out the goals of these legislative mandates (see Figure 1). The Division is directed by a board-certified physician Director, and each section is administered by an Assistant Division Director. A board certified pediatrician further provides the Assistant Directors with technical assistance and consultation. The programs of this Division's units can be briefly described as follows:

Figure 1

DIVISION OF FAMILY HEALTH SERVICES ORGANIZATIONAL CHART


Chief Pediatrician
Director's Office
Family Health Services Advisory Council
Contracts Unit
Budget Unit
Fiscal Unit
Administration Section
Policy Office
- Policy Analysis
- Information and Education
- Office of Nutrition
- Child Death Study
Statistics and Evaluation Unit
Maternal and Child Health Section
Services for Handicapped Children Section
Women, Infants & Children Unit
- Nutrition Supplements
- Nutrition Counseling & Education
Perinatal & Genetics Unit
- HRII Program
- High Risk Infant & Family Support Program
- Neonatal Intensive Care Regional Development
- Sudden Infant Death Syndrome (SIDS) Program
- Genetics Program
Preschool & School Health Unit
- Preschool Health Services
- School Health Services (incl. Postural Screening & Vision & Hearing Screening)
- Infant & Toddler Hearing Evaluation Program
- Hearing Aid Program
- Lead Poisoning Prevention Program
- Statewide Childhood Injury Prevention Program (SCIPP)
- Mass. Passenger Safety Program
Primary Care Unit
- Maternal & Infant Care Programs
- Children & Youth Programs
- Adolescent Health & Parenting & Pregnancy Programs
- Failure to Thrive Programs
Women's Health Unit
- Prevention of Sexual Abuse & Family Violence Programs
- Reproductive Health Program
- Women's Health & Learning Center in MCI
- Occupational Safety & Health for Office Workers Program
Early Childhood Development Services Unit
- Early Intervention Programs
- Integrated Preschools
- Training & Outreach
- Developmental Day Care Programs
Community Services Unit
- Home Care Services
- Training & Respite
- Camperships
- Medical Review Team
Case Management Services Unit (SSI-DCP)
- Individual Service Plans
- Technical Assistance & Training
- Outreach & Referral
Clinic Unit
- Clinic Services
- Specialized in-patient care, drugs, & equipment
- Special Medical Needs
- Adaptive Housing

1. Services to Handicapped Children (SHC)

Under the direction of the Division's Assistant Director for SHC, the SHC section contains programs that will be organized into four units in FFY '86.

a. The Clinic Unit provides specialized preventive, therapeutic and rehabilitative care to children with handicapping conditions and their families. Comprehensive multi-disciplinary habilitative services are provided to significantly handicapped children under age 18 for whom services are not available or not affordable, in cooperation with the child's family, primary care providers, school and community. Through specialized clinics directly operated by the Division or from which services are purchased, some 6,000 children throughout the state each year receive care for the following conditions: orthopedic, neurologic, developmental delay, oro-facial, scoliosis, cystic fibrosis, cardiac, epilepsy/seizure, hemophilia and inborn errors of metabolism. In addition, the Unit maintains an epilepsy drug program for seizure medication for needy, uninsured individuals regardless of age. In FFY '84, adaptive housing services and a special medical needs program (which provides limited financial assistance to families of children who, for diagnostic reasons, are ineligible for other clinic unit programs) were added with "Jobs Bill" funds, and these services will be maintained in FFY'86.

b. The Community Services Unit provides access to residential and supportive services for individuals from birth through 21 years of age with disabling conditions. Through the range of services which the Unit supports, families are helped to keep their children as close to home as possible and to ensure that each child is in the most appropriate, least restrictive program possible. Home care services, camperships and short-term residential respite care are offered and a multi-agency, multi-disciplinary team assesses the needs of multiply handicapped individuals. Individuals can also be certified as eligible for more extended care in a pediatric nursing home when that is deemed appropriate. Pending approval of a Home and Community Based Waiver by the Federal Department of Health and Human Services, in FFY '86 this Unit, in conjunction with the Case Management Services Unit, will be responsible for determining eligibility for a range of Medicaid funded services designed to enable severely multiply handicapped and chronically ill children to be cared for at home.

   Through participation in several interagency task forces, the Community Services Unit has been investigating the program needs of the head-injured and of multiply handicapped adults. During FFY '86, the Unit will begin to address the development of more extensive community-based services for individuals over age 22.

c. The Case Management Services Unit (CMSU) identifies, coordinates and monitors the comprehensive service needs of multiply handicapped children. Handicapped children between the ages of birth to eighteen, who receive SSI benefits, or who are served through other Division programs, or who are referred through community agencies are eligible for services. Staff of the Unit, working out of the four regional health offices and in Boston, provide information and referral, technical assistance, individual case advocacy, and coordinated case management services. In addition, Unit staff provide technical assistance, consultation and training to staff of other human service agencies and other organizations on federal and state entitlements and services and on resources available to handicapped children and their families.

The main objective of this unit is to ensure that multiply handicapped children receive necessary medical, educational, developmental, rehabilitative and social services through the facilitation of interagency collaboration, development of service linkages, and coordinated service planning. Representation on area and regional interagency task forces is an essential component of this Unit's activities to ensure a coordinated service delivery system, identify barriers to services, and develop community resources targeted for multiply handicapped and chronically ill children.

CMSU has developed a case management gradient system outlining different levels of service involvement in order to expand service capacity. Case managers provide ongoing training and education to parents or guardians to enable them to more effectively advocate for their children.

d. The Early Childhood Development Services Unit administers a system of contracted programs designed to help families assist their children in reaching their maximum developmental potential. Educational, therapeutic and support services to infants and young children at risk of or suffering from disabling conditions are offered through a statewide network of early intervention programs and through developmental day care, training and integrated preschool programs as well as outreach.

2. Maternal and Child Health (MCH)

Under the direction of an Assistant Director for MCH, in FFY '86 the MCH section will be organized into five units.

a. WIC Unit. The Special Supplemental Food Program for Women, Infants and Children is a federally funded nutrition intervention program which provides specific nutritious foods, nutrition counseling and health care referrals. Funds are allocated in accordance with a needs assessment, which ranks each city and town in Massachusetts with respect to its need for WIC services. Ranking is determined by low birth weight rate, teenage birth rate, neonatal mortality rate, unemployment rate and poverty. In FFY '86, 35 local agencies across the state will provide WIC services at over 100 sites to low income pregnant, breastfeeding and postpartum women, infants and children up to age 5 who are determined to be at nutritional risk.

b. The Preschool and School Health Unit provides a variety of services and supports a number of programs which focus on the prevention of morbidity and mortality and the promotion of preventive health services among all children in the Commonwealth.

A major programmatic component of the Unit is injury prevention. The services of the Statewide Childhood Injury Prevention Program (SCIPP) have been considerably expanded as a result of federal SPRANS funds received to implement injury prevention initiatives within established child health service programs and to develop an injury surveillance system. Current efforts are devoted to developing training materials and providing training to a variety of health professionals and community service agencies within Massachusetts and other state MCH programs. SCIPP is also beginning to fund local agencies to implement comprehensive injury prevention programs and to improve existing sources of injury data by providing training to hospital medical and records staff. In order to reflect an expansion of activities that includes programs for persons of all ages, the Child Passenger Safety Program has changed its name to the Massachusetts Passenger Safety Program (MPSP). Primarily funded by the National Highway Transportation Safety Administration, through the Governor's Highway Safety Bureau, MPSP promotes passenger safety by providing education, information and technical assistance as well as funding to car seat loaner programs at the local level. New initiatives as a result of increased appropriations for both MPSP and the Massachusetts Poison Center are being coordinated with the goals and objectives of the SCIPP.

The Preschool and School Health Unit also develops policy and provides information, education, consultation, and technical assistance in the areas of preschool and school health services and childhood injury prevention. The Unit establishes and enforces regulations regarding school health programs, and administers school health screening programs for vision, hearing, and postural defects. Programs funded through the Unit in FFY'86 will include: the Preschool Enrichment Team and a preschool health initiative for daycare providers; purchase and repair of hearing aids for financially eligible children; a Statewide Poison Control System; the Injury Prevention Resource Center, a comprehensive resource for health professional, schools, community agencies, child health services programs, business and industry, and others interested in injury control; and Lead Paint Poisoning Prevention programs, administered jointly with the state's Childhood Lead Poisoning Prevention Program (CLPPP).

c. The Perinatal and Genetics Unit provides a variety of services and supports a number of programs which focus on the prevention of morbidity and mortality, particularly in the perinatal period, and provides genetic education and information to providers and consumers.

This Unit develops policy and provides information, education, consultation, and technical assistance in the areas of perinatal health, including the effects of genetic and environmental factors on reproductive outcomes. In January, 1984, the Unit implemented a high risk infant identification and follow-up system and a pilot program to monitor the effects of environmental exposures on reproductive outcomes. Programs funded through the Unit in FFY '86 will include: targeted efforts to address disproportionately high infant mortality rates; a toll free hotline for information on the effects of various environmental exposures on reproductive outcomes; community based high risk infant and family support programs; discharge planning and community linkage in Neonatal Intensive Care Units; and the Sudden Infant Death Syndrome Program, providing counseling and support to affected families.

d. The Primary Care Unit supports the provision of high quality primary health care services for pregnant women, mothers, children and adolescents, with the focus on assurance of availability of services to high-risk and low-income populations. The Unit is involved in developing standards for ambulatory and hospital care and for birthing centers. Information, education and technical assistance are provided in the areas of adolescent health and pregnancy, family planning and nutrition.

Programs funded through this Unit include Maternal and Infant Care (MIC), Children and Youth (C&Y), Comprehensive Adolescent Health, Pregnant and Parenting Adolescents and newly initiated in FFY '84, Failure to Thrive (FTT) Programs. The prenatal (MIC) and pediatric (C&Y) projects provide comprehensive multi-disciplinary care to high risk, low-income pregnant women, mothers and children with medical care augmented by social, nutritional, family planning, dental and other preventive health services. All services are available to the uninsured on a sliding fee scale.

Adolescent health services include counseling and education that focus on nutrition, contraception, sexuality, adolescent pregnancy, parenting skills, and the promotion of good health habits. Specialized pregnant and parenting adolescent programs are designed to ensure early identification of pregnant adolescents in order to link them with prenatal care, and provide educational, counseling and social services to meet their special needs. Funded with state money as part of the response to the 1983 Massachusetts Nutrition Survey, the Failure To Thrive Programs were initiated in April of FFY '84 following a statewide RFP process. The FTT programs provide diagnosis and treatment for families with children who are severely underweight and show persistent deviation below their established growth curves. Programs provide intensive case management and follow-up as well as consultation and education to community based providers. All programs utilize a multi-disciplinary team approach.

e. The Women's Health Unit provides a number of services designed to decrease morbidity and mortality and to promote knowledge and well-being among women in Massachusetts. The Women's Health Unit places particular emphasis on assessing health risks and developing services for low-income and minority women. Health issues are approached within the context of women's roles and social conditions in our society; where health related services for women have been historically under-funded, the Women's Health Program has attempted to collect statistical evidence and design programs for change.

Services in FFY '86 will include rape, sexual abuse, and family violence prevention as well as comprehensive services to rape victims; diethylstilbestrol (DES) information, education and diagnostic evaluations; occupational health education for office workers, development of a statewide conference on "Women in the Workplace"; health programs for incarcerated women, including workshops, individual counseling and support groups; and establishment of a Resource Center for information and referral. Also, in FFY'86 this Unit will assess the needs for and develop recommendations regarding primary gynecological and reproductive health care.

3. Administration

The shared, centralized administrative services of the Division are organized into 5 units. Contracting, fiscal and budgeting support services are under the direction of the Assistant Director for Administration and Finance, with the Division Director acting as supervisor for the Statistics and Evaluation Unit and the Policy Office.

a. Administration/Contracts Unit has the responsibility for processing, providing technical assistance, reviewing, and financially approving all state and federal consultant and purchase of service contracts, and payment of purchase of service invoices. All agency contracts must be channeled through the Contracts Unit where they are reviewed for compliance with all state and federal administrative regulations. Contract budget documents are reviewed to insure allowability of costs. The Contracts Unit also schedules and coordinates all requests for audits on program providers.

Commencing in FFY'86, the Contract Unit's mechanism for reimbursement of services to purchase of service providers is converting from a manual system to a computerized system (MIDAS) which should result in expedient payments to all providers.

b. Administration/Fiscal Unit has the responsibility for processing and payment of clinical, general administrative, and consultant invoices. As the invoices are processed, the expenditures are recorded in the general ledgers according to program budget areas. Quarterly financial reports are produced and the information is fed back to the Budget Unit in order to monitor expenditure levels as well as timely reprogramming of funds. In addition to invoice processing, the Unit is responsible for maximizing third party revenue. The Division subsidizes clinical services for clients only after all third party reimbursements options have been exhausted.

In FFY 1986 the Fiscal Unit will also convert its payment and recording mechanisms to MIDAS. This automated system should provide more timely information on account expenditure status, allow for more timely transfer between accounts, and expedite the processing time for payment to purchase of service providers.

c. Administration/Budget Unit has two functions; personnel management and state and federal budget management. All agency positions must be cleared through the Budget Unit in order that adequate funds be budgeted for the position. The second function of the Budget Unit involves the preparation, monitoring, and rebudgeting of both state and federal budget appropriations. In addition to preparing the standard budget forms for the state and federal budget submissions, the Budget Unit must also prepare quarterly spending plans for the state and reconcile on a monthly basis the agency's federal expenditures with those shown by the Department's central fiscal office.

d. The Statistics and Evaluation Unit assists in collecting and analyzing data and in developing needs assessment, evaluative and research methodologies. Its activities include developing and providing a comprehensive data set on target populations and services that can be used to plan programs, comply with federal and state reporting requirements, and inform the public and professionals; evaluating program effectiveness and impact on health status; coordinating research carried out within the Division or by academic institutions using the Division's target populations; assisting in ongoing needs assessment and planning; and working with other statistical units in the Department of Public Health.

e. The Policy Office, which works closely with the Statistics and Evaluation Unit, serves as an analytic and informational resource to the Division, other state agencies, and the public. The Office monitors and analyzes federal and state legislation as well as regulations and policies which bear on maternal and child health; develops and implements mechanisms for citizen participation in planning; develops strategies for achieving the overall mission and goals of the Division; coordinates public and internal planning processes; and provides information and education programs for staff and the public. It is also responsible for specialized policy and research activities which cut across program areas, including the newly established Office of Nutrition.

The Office of Nutrition was established within the Policy Office in 1984. State funding for the Office was provided in response to the findings of the Department's 1983 Massachusetts Nutrition Survey which identified chronic malnutrition as a significant health problem among low-income Massachusetts children. The goals of the Office of Nutrition include: establishing a system for ongoing surveillance of nutritional status among high-risk groups in the Commonwealth; identifying needs and problems related to nutritional status and services, and developing strategies to address them, including improved referral systems, coordination of services and improvements in state policy, planning and programming; and providing consultation and technical assistance to other state agencies, providers and consumers in order to ensure integration of high-quality nutrition services within existing systems.

The Policy Office also provides staff support for the Advisory Council described below.

4. DFHS Advisory Council

Established by the Commissioner of the Massachusetts Department of Public Health in March 1982, the Council is composed of 24 professionals, providers, advocates and citizens, as well as ex-officio members from relevant state agencies. The Council provides broad representation for Maternal and Child Health interest groups and is made up of individuals with longstanding interest in and experience with family health programs. The Council achieves representation for both urban and rural interests; maternal and child health as well as handicapped children's services; preschoolers, school-aged children and adolescents; a range of professional interests, including doctors, nurses, lawyers and physical therapists; and primary as well as tertiary care.

Currently chaired by Dr. Deborah Walker, Assistant Professor, Harvard School of Public Health, the Council meets every two months and is charged with a number of responsibilities. Chief among them is reviewing, commenting on, and making recommendations about the Division's Block Grant applications prior to their submission. The Council therefore provides one vehicle for meeting the requirements of Section 505 regarding public comment on this document.

In summary, this brief description of the Division's sections and units provides an orientation to the general objectives of each of the units. These will be described more fully in the Description of Intended Expenditures. In general, however, the functions of the DFHS program are:

1. To provide services to targeted groups of women, children and families through direct employees or contracted agencies.

2. To provide technical assistance to agencies on the provision of specialized services and the public health aspects of maternal and child health.

3. To set standards for the provision of services.

4. To utilize epidemiological analysis of child health problems and evaluation of program effectiveness as tools in establishing MCH policy and programs.

5. To coordinate services provided in the public and private sector which are targeted to women and children.

III. Section 505: DESCRIPTION OF INTENDED EXPENDITURES & STATEMENT OF ASSURANCES (1) INTENDED USE OF PAYMENTS

(A) DESCRIPTION OF POPULATIONS, AREAS, AND LOCALITIES IDENTIFIED AS BEING IN NEED OF MCH SERVICES

There are three major sources of information to identify women and children in need of Maternal and Child Health (MCH) services. These are:

1. Descriptive population data
2. Health status indicators
3. Service indicators

Population indicators are intended to show the potential number of individuals eligible for MCH services. The main source of population data is the 1980 Federal census which contains a wide variety of demographic and economic information. Supplementing the census are vital registration data which provide maternal age and geographic distribution of births. Another source of general population data is unemployment statistics.

Health status indicators are normally measures or estimates of specific health problems. Some of these, such as low birthweight rates and infant and neonatal mortality rates are derived directly from statewide vital registration statistics. Others are based on projects within MCH such as the Statewide Childhood Injury Prevention Program (SCIPP) for accident rates. Other Public Health Units are sources of information, such as the State Laboratory for data on lead paint poisoning. Many of these programs provide either sample data or estimates based on limited coverage.

Service indicators are statistics based on measures of populations currently served by programs in MCH. These include Services to Handicapped Children (SHC) clinics, the Early Intervention Program (EI), and the Supplemental Security Income-Disabled Children Program (SSI-DCP). In some cases, there is little information on the size of the population in need of services. This is particularly true in the case of handicapped children. However, in several other programs such as Women, Infants, and Children (WIC) and the Lead Poisoning Prevention Program, there are reliable estimates of the total need.

In determining areas of greatest need for the placement of services, all three sources of information must be examined. The Division of Family Health Services has conducted needs assessments in a number of program areas which have statistically combined relevant measures of population and health status indicators with service indicators. These have been used during the stage when program proposals are reviewed. Past, ongoing and future needs assessment activities are described in the last part of this section.

Depending on the type of services required and the means of delivering them, 3 different types of planning area are used:

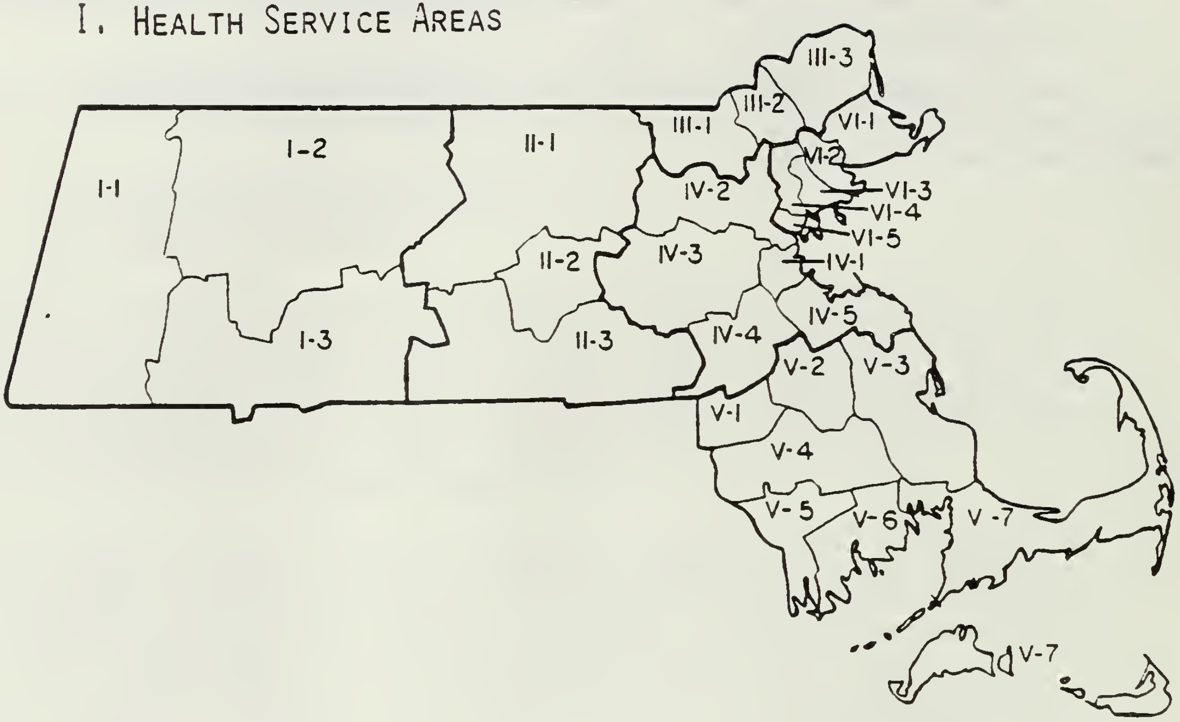
1. Health Service Areas (HSAs) - Figure 2-I
2. Department of Public Health (DPH) Regions - Figure 2-II
3. Cities and towns - Figure 2-III

Some programs such as the Case Management Services Unit (SSI-DCP) and the Early Intervention program use slight modifications of these.

Figure 2

MASSACHUSETTS PLANNING AREAS

I. Health Service Areas



II. DPH Areas

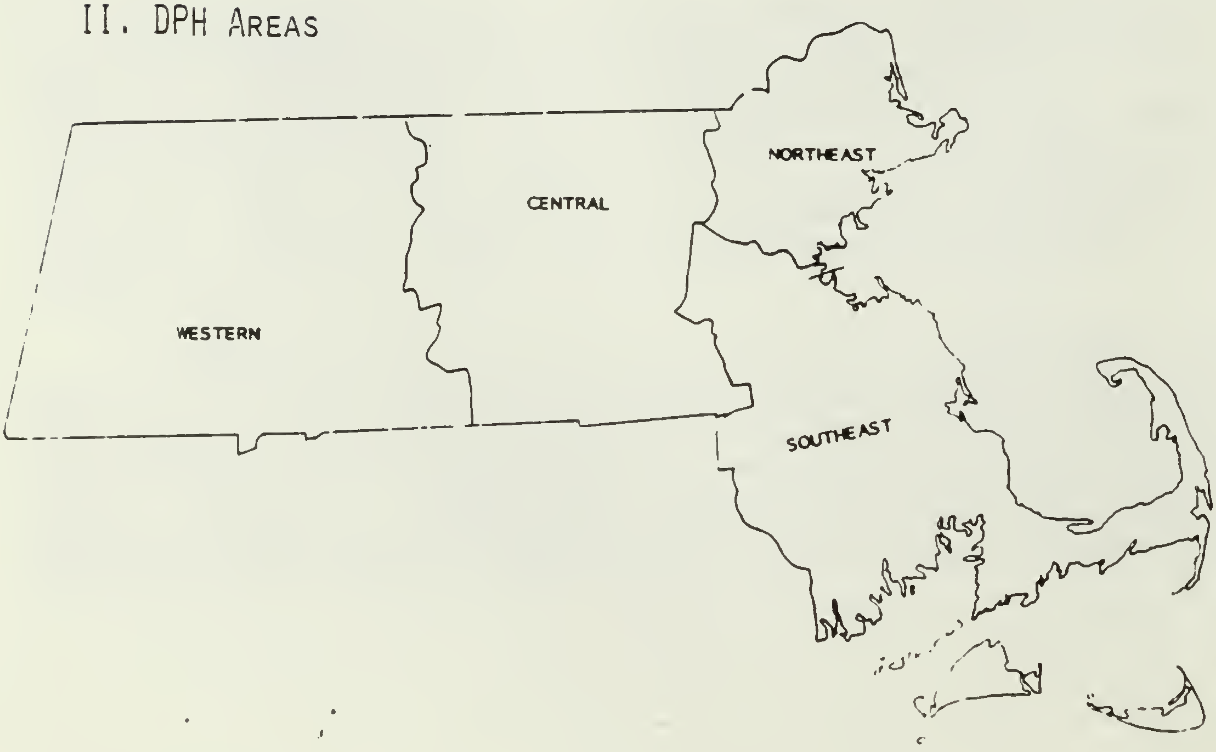
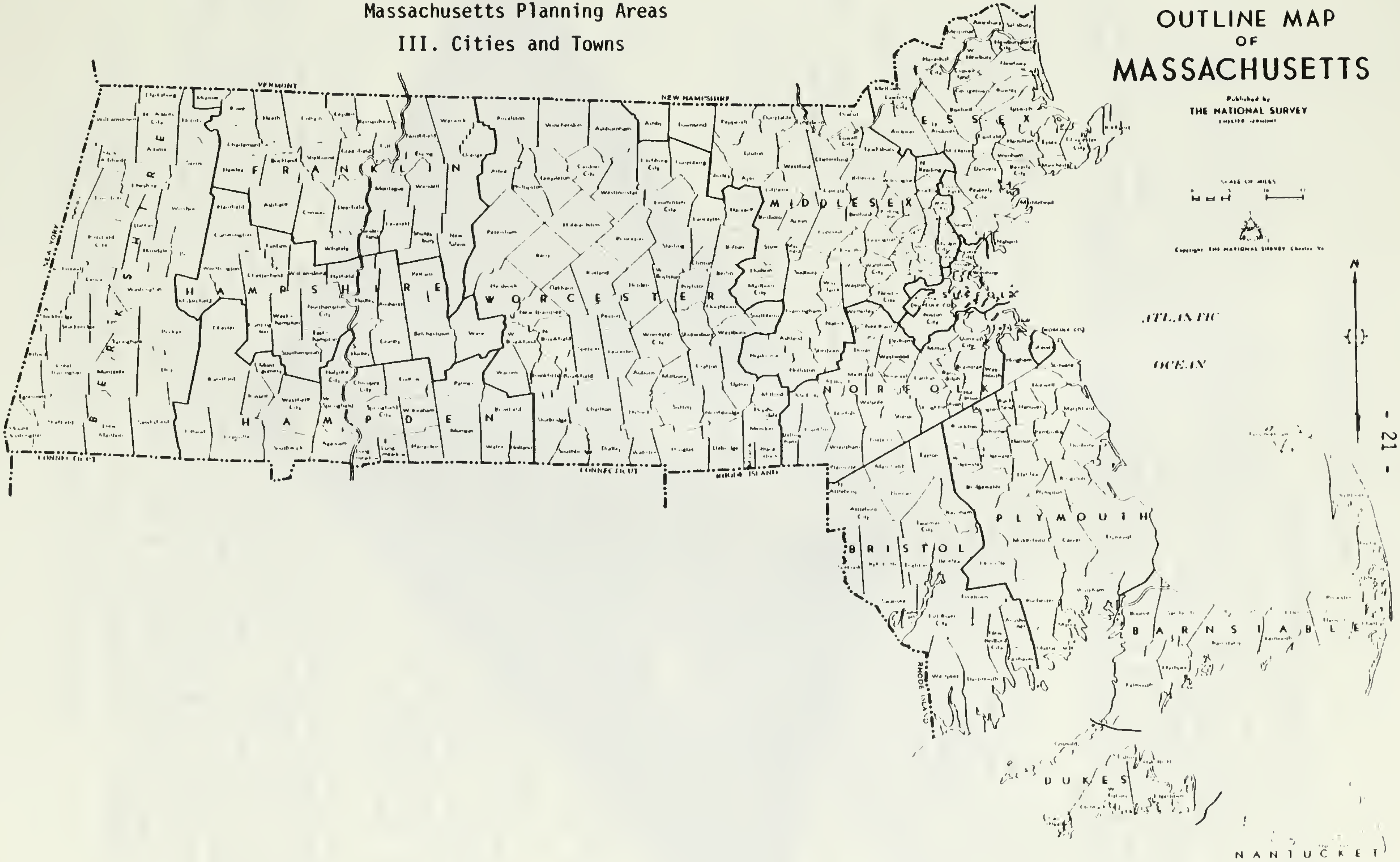


Figure 2

Massachusetts Planning Areas

III. Cities and Towns



1. POPULATION INDICATORS

Population Size and Distribution

In 1980, the population of Massachusetts was 5,737,037. No marked changes in size are expected to occur during the next 10 years. The highest concentration of population is in Boston and its surrounding suburbs (Figures 3 & 4). Substantial pockets of high density are also found in the Worcester, Springfield, Lawrence/Lowell, and Fall River/New Bedford areas. Nearly 75% of the states' population lives in the eastern half of the state. More than a third of the total population lives in the HSA that includes Boston.

While the majority of people live in or close to cities, there is a clear decline in the size of urban areas. Of the 25 cities with the largest population of children, six (Haverhill, Brockton, Taunton, Weymouth, Framingham, and Plymouth) increased in overall population since 1970 (Table 1). All of the rest declined considerably, in some cases by as much as 17%. Declines of even greater magnitude occurred in the population of children in urban areas. In many cities, such as Boston, Cambridge, Quincy, Somerville, Chicopee, and Weymouth, the number of children under age 5 was reduced by 30 to 45%. Some of this reduction is movement towards the south and southwest portions of the state. Plymouth, for example, nearly doubled both it's overall population and the population of children under age 5. However, a large fraction of the decline in numbers of children in Massachusetts is a result of reduced fertility.

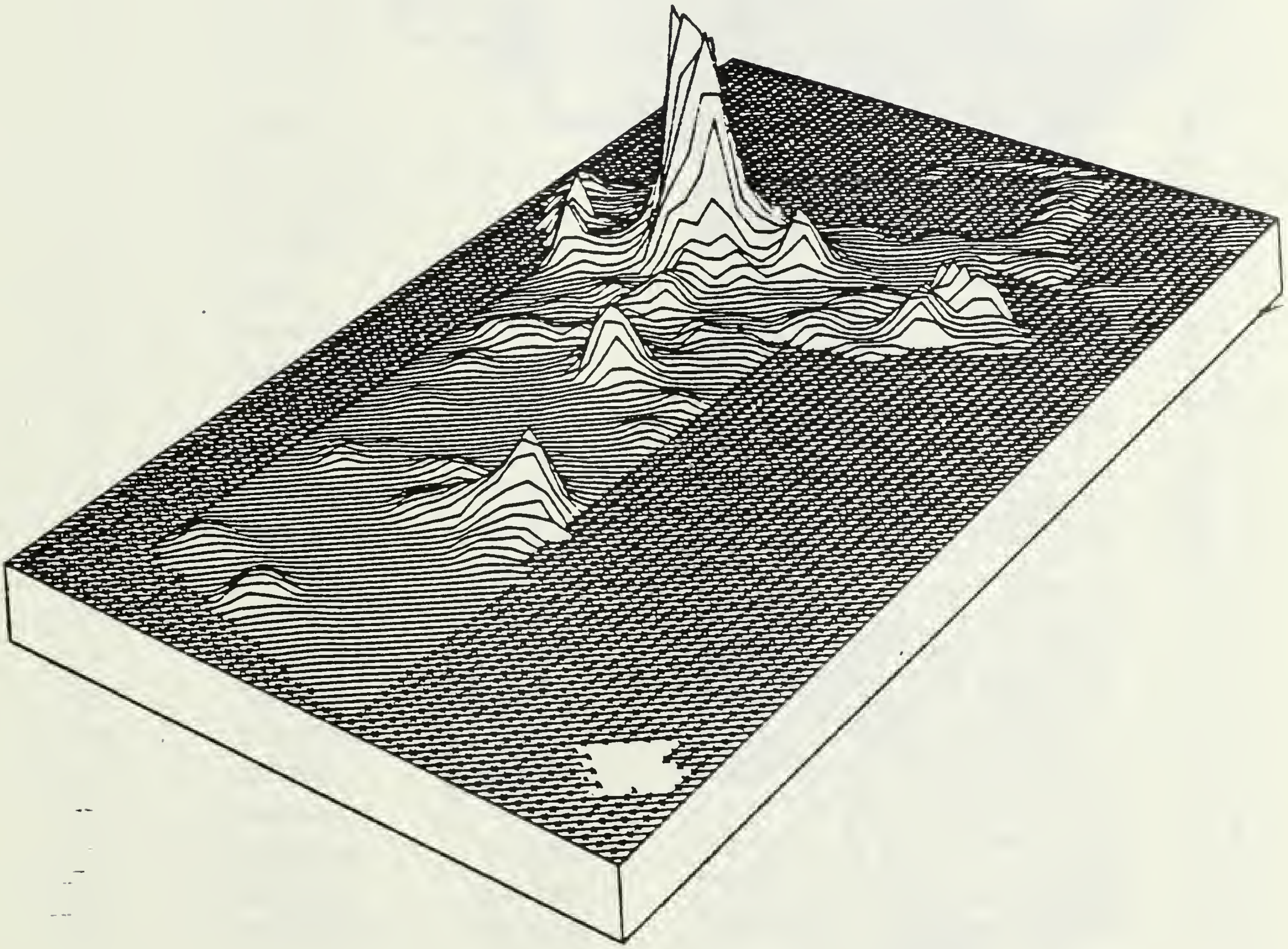
It is not clear at this point who is moving out of the cities. If the wealthier segments of the population are leaving the cities, they may be leaving behind a population that is poorer on average and in greater need of services.

In 1980, there were 1,721,520 children under the age of 19 in the state (Tables 2 & 3). They formed nearly a third of the state's population. There were 75,749 births in 1982. The preschool population (aged 0-4 years) was 337,215 in 1980; the early school-age population (5-13 years) was 737,918; the teen population (14-19 years) was 646,387; and the young adult population (20-21 years) was 228,772.

The age distribution of the state's population is generally uniform from one region to another. The greatest variation in age distribution between regions is only 3.2% in the 5-13 year age group. The highest concentrations of early school-age children are in HSA's 3 and 5. The greatest proportion of women of childbearing age and also the largest absolute numbers of women in that age category are in Boston and vicinity. Children born during the baby boom of the 1950's and 1960's are now in their peak reproductive years and form the largest single age group in the state's population.

Figure 3.

1980 POPULATION DENSITY OF MASSACHUSETTS



Source: University Computing Center, University of Massachusetts at Amherst
Programming by Ron Lussier
Data base compiled by Dennis Swartout and Mary Richards

Figure 4

POPULATION - BASED ON 1980 CENSUS DATA

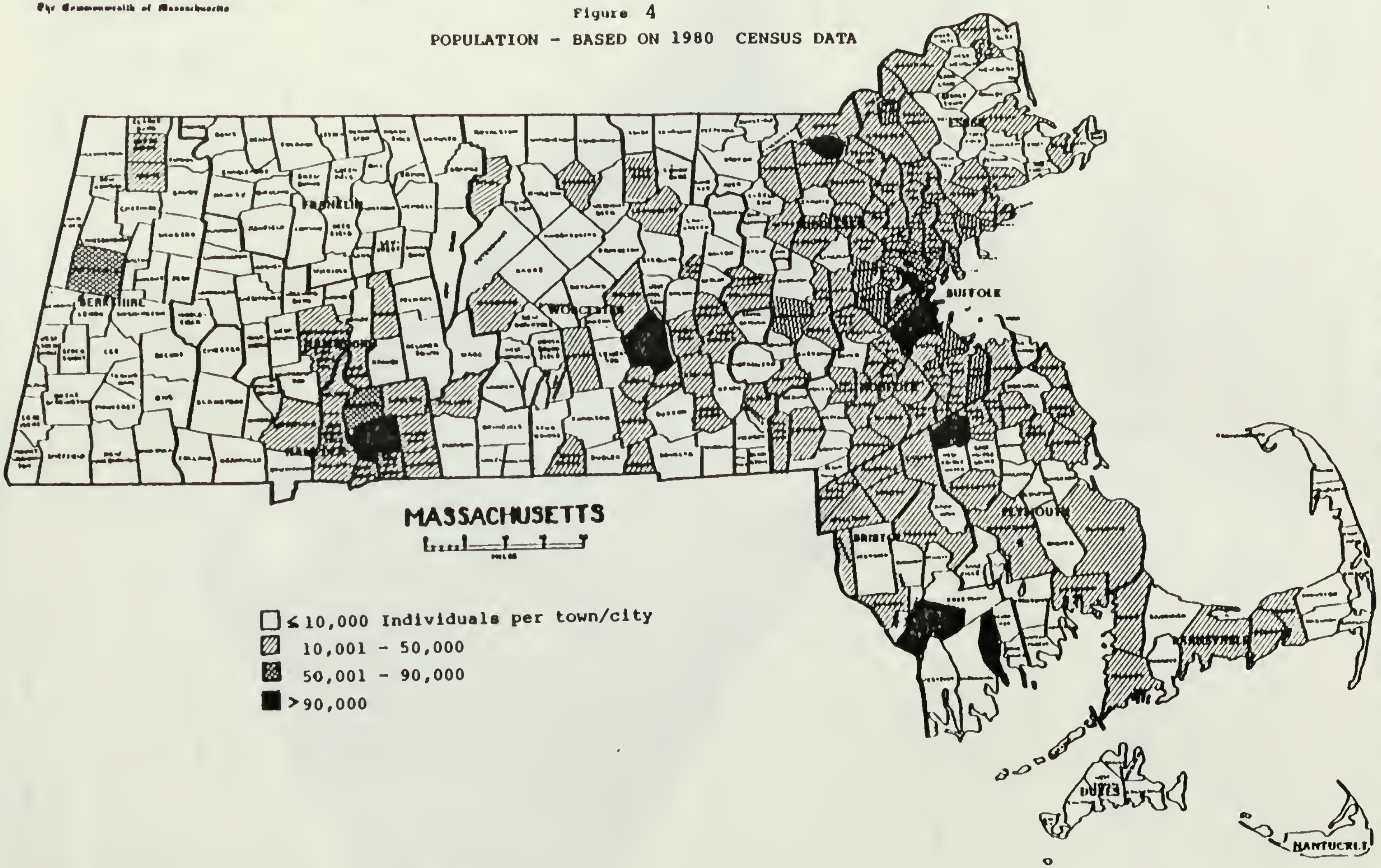


Table 1

CHANGES IN TOTAL POPULATION SIZE AND CHILDREN UNDER 5 SINCE 1970

25 CITIES WITH THE LARGEST CHILD POPULATIONS IN MASSACHUSETTS

Rank Order By Size Of Child Population	City / Town	Total Population		Child Population	
		1980 Population	Percent Change 1970 to 1980	Children Under 5	Percent Change 1970 to 1980
1	Boston	562,994	-12.2	30,118	-39.7
2	Springfield	152,319	- 7.1	10,531	-21.6
3	Worcester	161,799	- 8.4	9,574	-26.0
4	Brockton	95,172	+ 6.9	6,988	-24.5
5	Lowell	92,418	- 1.9	6,908	-18.1
6	New Bedford	98,478	- 3.2	6,792	-13.9
7	Fall River	92,574	- 4.5	6,311	-23.7
8	Lawrence	63,175	- 5.6	5,293	- 5.8
9	Lynn	78,471	-13.1	5,012	-33.6
10	Somerville	77,372	-12.8	3,990	-47.1
11	Cambridge	95,322	- 5.0	3,928	-33.6
12	Quincy	84,743	- 3.7	3,835	-44.7
13	Newton	83,622	- 8.4	3,707	-34.7
14	Framingham	65,113	+ 1.7	3,422	-42.9
15	Chicopee	55,112	-17.3	3,330	-40.6
16	Holyoke	44,678	-10.8	3,177	-25.5
17	Pittsfield	51,974	- 8.8	3,163	-31.0
18	Haverhill	46,865	+ 1.6	3,112	-18.6
19	Taunton	45,001	+ 2.8	3,070	-12.0
20	Plymouth	35,913	+93.0	2,979	+84.8
21	Malden	53,386	- 4.9	2,911	-38.8
22	Weymouth	55,601	+ 1.8	2,885	-38.9
23	Medford	58,076	- 9.8	2,759	-43.1
24	Waltham	58,200	- 5.5	2,657	- 4.4
25	Fitchburg	39,580	- 8.7	2,536	-28.0
	MASSACHUSETTS	5,737,037	+ 0.8	337,215	-28.3

Table 2

MASSACHUSETTS POPULATION BY AGE - 1980

	AGE (YEARS)				FEMALES
GEOGRAPHIC AREA	0 - 4	5 - 13	14 - 19	20 - 21	15 - 44
MASSACHUSETTS	337,215	737,918	646,387	228,772	1,354,656
HSA SUB-AREAS					
11	8,409	18,368	16,858	5,667	32,091
12	9,408	19,963	22,338	12,875	46,584
13	30,135	63,768	55,694	18,242	110,883
21	15,411	30,034	24,787	8,482	50,011
22	13,760	28,874	27,196	11,339	53,333
23	15,898	34,809	26,130	7,176	51,854
31	15,882	35,212	28,162	8,886	53,802
32	10,048	20,690	15,903	4,958	32,102
33	7,650	16,225	12,668	3,520	26,415
41	36,368	71,802	76,051	38,253	186,535
42	22,850	52,675	50,323	19,687	115,200
43	24,887	58,976	55,887	19,161	118,954
44	8,935	23,098	19,518	5,130	37,387
45	15,084	38,684	35,930	10,785	69,581
51	6,253	13,048	10,151	3,211	21,434
52	14,173	30,648	24,217	7,933	48,973
53	10,917	24,272	15,605	3,536	33,148
54	7,190	15,528	11,692	3,187	23,885
55	9,460	21,227	15,358	4,715	31,124
56	10,212	20,702	16,924	5,506	33,689
57	10,066	21,614	16,431	4,781	35,653
61	5,962	13,462	12,121	3,613	25,408
62	6,793	15,861	14,696	4,580	31,070
63	7,567	16,862	14,085	4,172	28,816
64	6,172	14,566	12,268	3,529	25,401
65	7,725	16,950	15,394	5,848	33,692

Table 3

POPULATION BY AGE

FOR THE 25 CITIES WITH THE LARGEST CHILD POPULATIONS IN MASSACHUSETTS

		AGE (YEARS)				FEMALES
		0 - 4	5 - 13	14 - 19	20 - 21	15 - 44
1	Boston	30,118	57,663	63,457	33,090	150,887
2	Springfield	10,531	20,452	17,398	6,404	34,802
3	Worcester	9,574	18,375	18,689	9,015	36,375
4	Brockton	6,988	14,349	10,674	3,401	22,277
5	Lowell	6,908	12,264	10,682	4,577	21,067
6	New Bedford	6,792	12,600	9,768	3,456	20,361
7	Fall River	6,311	12,481	9,076	3,162	18,897
8	Lawrence	5,293	8,774	6,261	2,305	13,587
9	Lynn	5,012	9,856	7,995	2,581	16,846
10	Somerville	3,990	7,921	7,959	4,012	20,205
11	Cambridge	3,928	7,247	9,848	6,770	28,287
12	Quincy	3,835	8,690	8,489	3,192	19,582
13	Newton	3,707	8,913	9,710	3,335	21,361
14	Framingham	3,422	7,837	7,188	2,718	16,727
15	Chicopee	3,330	6,557	5,849	1,864	11,952
16	Holyoke	3,177	5,890	4,815	1,490	9,241
17	Pittsfield	3,163	6,818	5,819	1,536	11,240
18	Haverhill	3,112	6,222	5,021	1,616	10,396
19	Taunton	3,070	5,898	4,827	1,624	10,203
20	Plymouth	2,979	5,953	3,238	736	8,136
21	Malden	2,911	6,195	5,037	1,776	12,165
22	Weymouth	2,885	7,280	6,651	2,023	13,118
23	Medford	2,759	6,489	6,890	2,738	13,407
24	Waltham	2,657	5,570	7,120	3,769	14,938
25	Fitchburg	2,536	4,665	5,053	2,212	9,472
	MASSACHUSETTTS	337,215	737,918	646,387	228,772	1,357,022

In 1980, there were 1,357,025 women of childbearing age (15-44 years) in Massachusetts. The general Fertility Rate (live births/1,000 women 15-44) was 54.5 in Massachusetts in 1981 and 53.5 in 1980. There is considerable variation in fertility rates across the state (Figure 5). The highest rates are seen in HSA III (Lawrence area) and HSA V (southeastern Massachusetts). In these areas, all of the subareas are above the statewide figure. Boston is slightly below the state value and its wealthier suburbs (HSA IV) are considerably below the state value. In some cities, such as Lawrence, Lowell, and Holyoke, fertility rates are close to 50% higher than the state value. Table 4 shows that of the 25 largest cities and towns, 11 exceed the state fertility rate by more than one standard deviation.

Teenage Births

Teenagers are at high risk for adverse pregnancy outcomes. Complications of pregnancy and delivery, low birthweight, and infant mortality are associated with poor nutrition, smoking, substance abuse, and inadequate prenatal care. Pregnant teenagers, as a group, have one or more of these characteristics with predictably poor outcomes for the newborn and the mother. Low birthweight is twice as common among children born to teenage mothers as it is among children born to older women. Minority populations consistently have teenage birth rates about double those of the total population and triple the rates to white mothers in some areas of the state.

Five HSA subareas (HSA I-3, III-2, IV-1, V-5, and V-6) have teenage fertility rates greater than one standard deviation above the state mean (Figure 6). The lowest rates are found in the suburbs of Boston. Urban areas characteristically have high rates of teen births as well. Fifteen of the 25 cities with the largest child population have teenage fertility rates higher than the state figure (Table 4). In some cities, such as Lawrence and Holyoke with 1980 teenage fertility rates of 48.1 and 44.7 respectively, the rates approach the Massachusetts overall fertility rate of 53.5/1000 for women aged 15-44.

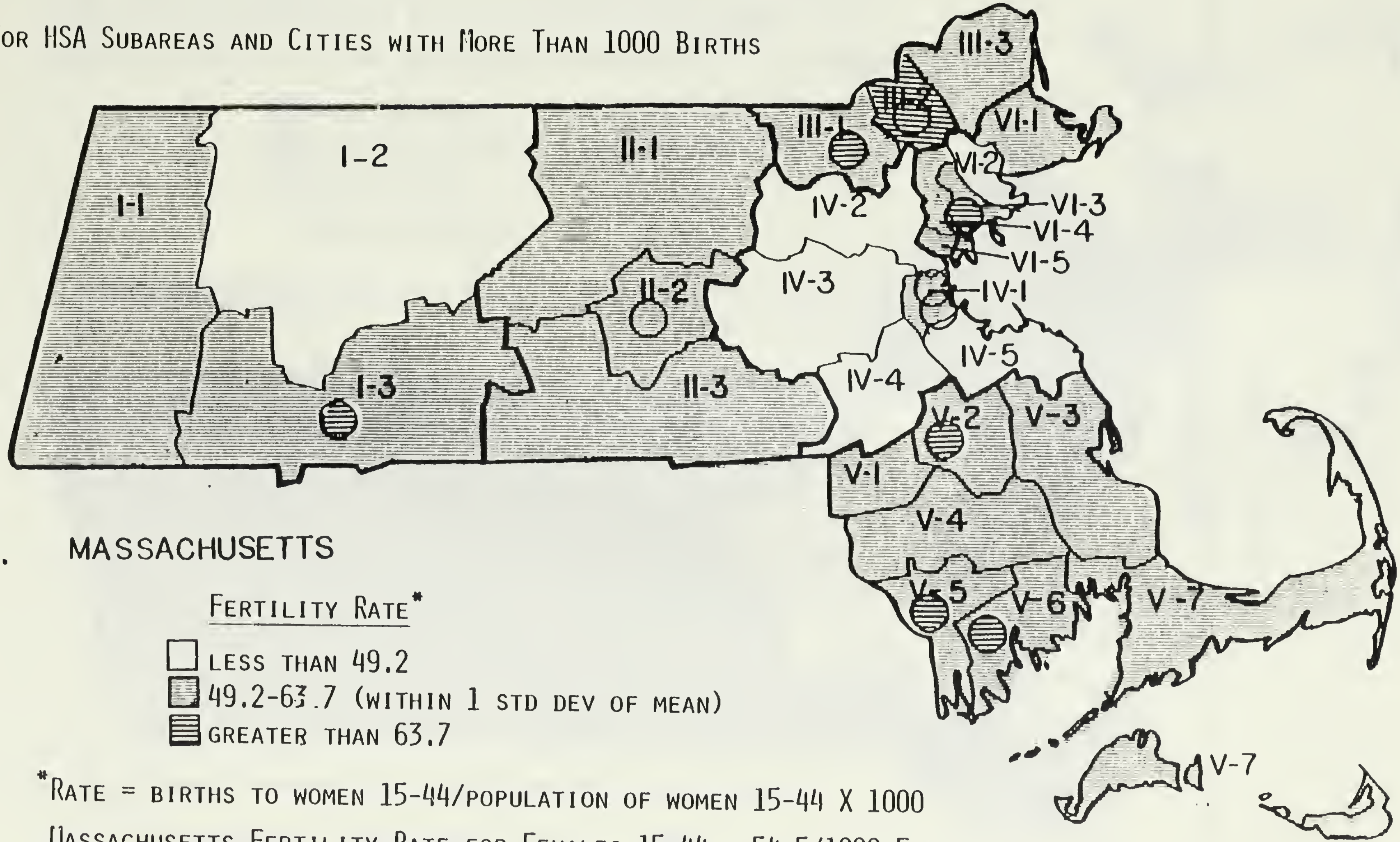
Birth Trends

Since the late 1960's, the total number of births to women in Massachusetts has declined from a peak of over 100,000 per year to its current level of in the mid 70,000's. Reaching its lowest point in 1976, the total number of births has recently begun to climb. Presumably, as baby-boom women reach peak reproductive ages, and as women who have postponed reproduction finally decide to have children, fertility rates will continue to increase slowly, then decline again. Some of the changes in fertility are visible in Figure 7. The most dramatic changes have occurred to women aged 20 - 24 and 30 - 34. The proportion of births to women aged 20 - 24

Figure 5.

FERTILITY RATES FOR FEMALES AGE 15-44* - 1981

FOR HSA SUBAREAS AND CITIES WITH MORE THAN 1000 BIRTHS



FERTILITY RATE*

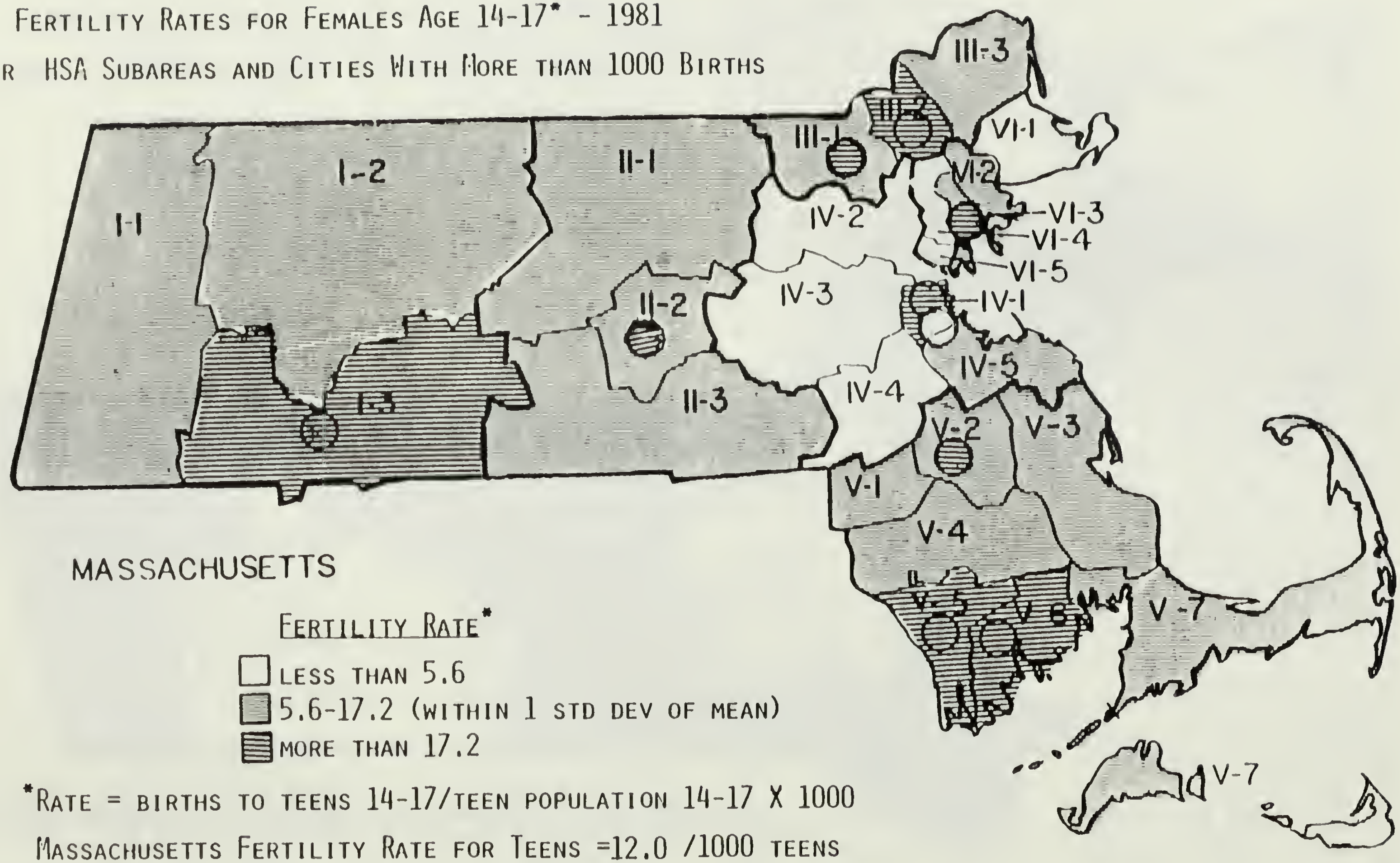
☐ LESS THAN 49.2
▨ 49.2-63.7 (WITHIN 1 STD DEV OF MEAN)
▤ GREATER THAN 63.7

*RATE = BIRTHS TO WOMEN 15-44/POPULATION OF WOMEN 15-44 X 1000

MASSACHUSETTS FERTILITY RATE FOR FEMALES 15-44 = 54.5/1000 FEMALES

Figure 6.

FERTILITY RATES FOR FEMALES AGE 14-17* - 1981
FOR HSA SUBAREAS AND CITIES WITH MORE THAN 1000 BIRTHS



FERTILITY RATE*

- □ LESS THAN 5.6
- ▨ 5.6-17.2 (WITHIN 1 STD DEV OF MEAN)
- ▤ MORE THAN 17.2

*RATE = BIRTHS TO TEENS 14-17/TEEN POPULATION 14-17 X 1000

MASSACHUSETTS FERTILITY RATE FOR TEENS =12.0 /1000 TEENS

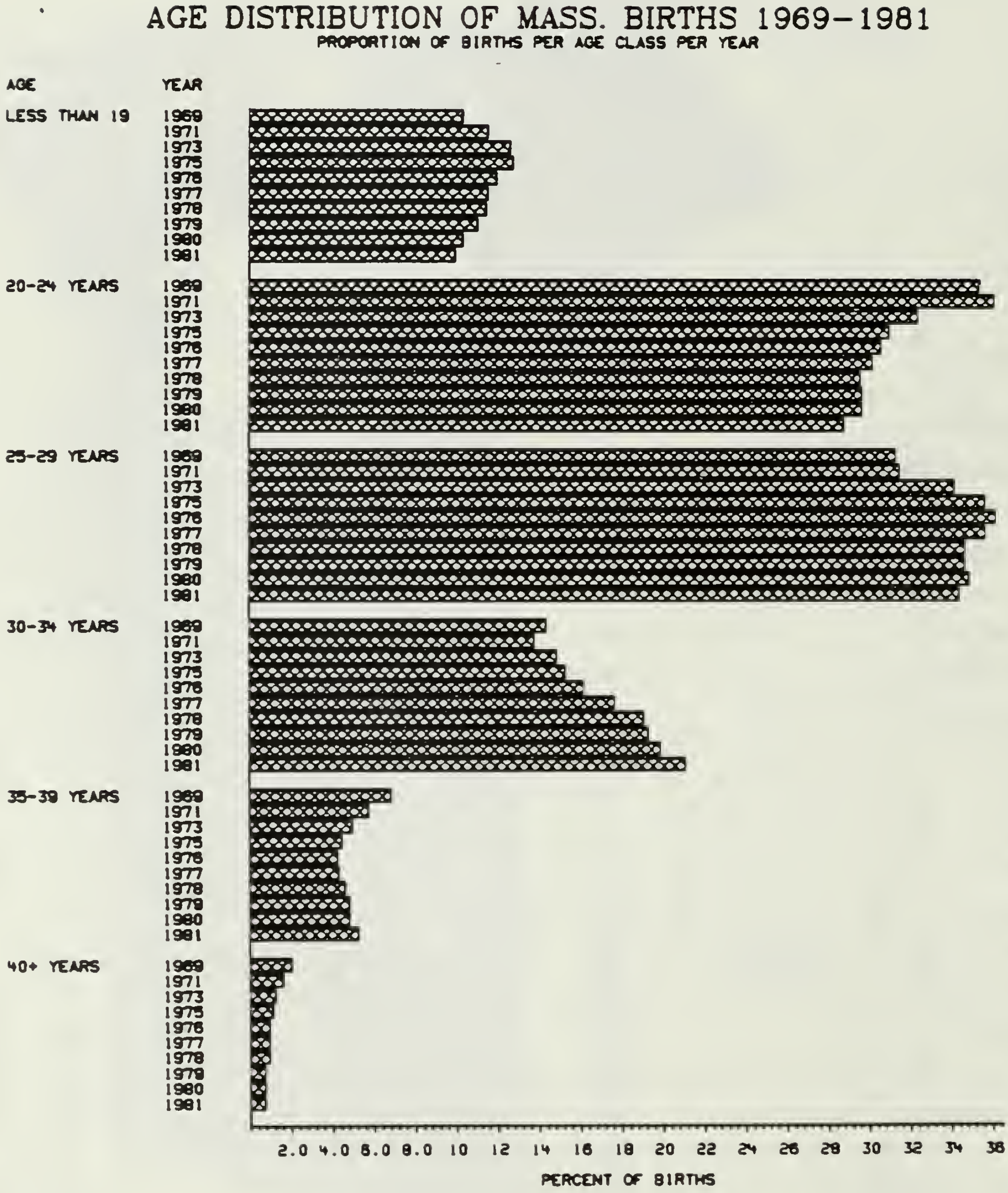
Table 4

FERTILITY RATES

FOR THE 25 CITIES WITH THE LARGEST CHILD POPULATIONS LESS THAN AGE 5 IN MASSACHUSETTS - 1980

	AGE 15-44		AGE 14-17	
City	Fertility Rate	Number Births	Fertility Rate	Number Births
Lawrence	96.5	1,308	48.1	99
Holyoke	80.0	739	44.7	73
Lowell	75.5	1,590	32.7	105
Plymouth	73.0	594	11.1	13
Lynn	71.9	1,212	24.7	65
Haverhill	70.7	735	22.9	38
Fall River	69.9	1,321	19.5	59
Springfield	69.5	2,420	37.9	202
New Bedford	68.9	1,403	22.4	71
Brockton	67.7	1,509	19.7	73
Taunton	65.6	669	14.3	23
Chicopee	63.8	762	16.4	31
Worcester	60.8	2,213	27.1	135
Pittsfield	60.5	680	18.6	37
Fitchburg	57.5	545	18.0	25
Malden	52.1	634	4.7	8
Boston	50.8	7,671	27.2	454
Quincy	48.9	958	4.1	11
Medford	47.0	642	2.4	5
Weymouth	47.6	625	5.6	12
Somerville	46.1	931	6.2	14
Framingham	44.9	751	5.7	13
Waltham	41.7	623	9.5	16
Newton	36.6	781	2.6	7
Cambridge	34.2	967	11.5	21
MASSACHUSETTS	53.5	72,591	12.2	2,471

Figure 7.


AGE DISTRIBUTION OF MASS. BIRTHS 1969–1981
PROPORTION OF BIRTHS PER AGE CLASS PER YEAR
AGE
YEAR
LESS THAN 19
20-24 YEARS
25-29 YEARS
30-34 YEARS
35-39 YEARS
40+ YEARS
1969
1971
1973
1975
1976
1977
1978
1979
1980
1981
2.0
4.0
6.0
8.0
10
12
14
16
18
20
22
24
26
28
30
32
34
36
PERCENT OF BIRTHS

has shifted from 36% of all births to less than 30%. The proportion of births to women aged 30 - 34 has increased by 50% from about 15% of all births to about 22%. The proportion of births to women 25 - 29 years old has increased slightly. The proportion of teen births has decreased slightly since 1975 and of births to women 35 - 39 has increased slightly since 1976.

Poverty

Individuals and families whose incomes are at or near the poverty line are at greater risk of maternal and child health problems. They often lack the resources to purchase medical care, adequate nutrition, and safe housing. Of increased concern are individuals above the poverty line but below 200% of that line (working poor and the recently unemployed). These individuals often do not have private health insurance and may be ineligible for Medicaid. Medical care for them becomes a luxury they cannot afford, affecting their ability to seek preventive care.

It is estimated that 112,800 children under the age of 5 are living below 200% of poverty line. Of these, slightly less than half (52,535) are below 100% of the poverty line. Over a quarter of all children in Massachusetts under age five are living in or near poverty. In 8 out of 26 HSA subareas (HSA I-3, II-2, III-2, V-5, V-6, V-7, IV-1, and VI-3) more than 38% of all children under age 5 are living below 200% of the poverty line (Figure 8). The lowest levels of poverty are found in the affluent suburbs around Boston. In addition, the 1980 census indicated that 140,277 children aged 5 to 17 are living below the poverty line.

Urban areas have very high concentrations of poor and near-poor populations. Nineteen of the 25 cities with the largest child populations have a larger percentage of children below 200% of the poverty line than the state figure (Table 5). In Holyoke, Boston, Lawrence, Springfield, and New Bedford, more than half the children are below 200% of poverty. In these same five cities, there are 18,419 children below poverty. This represents 35% of all the children below 100% of the poverty line in the state.

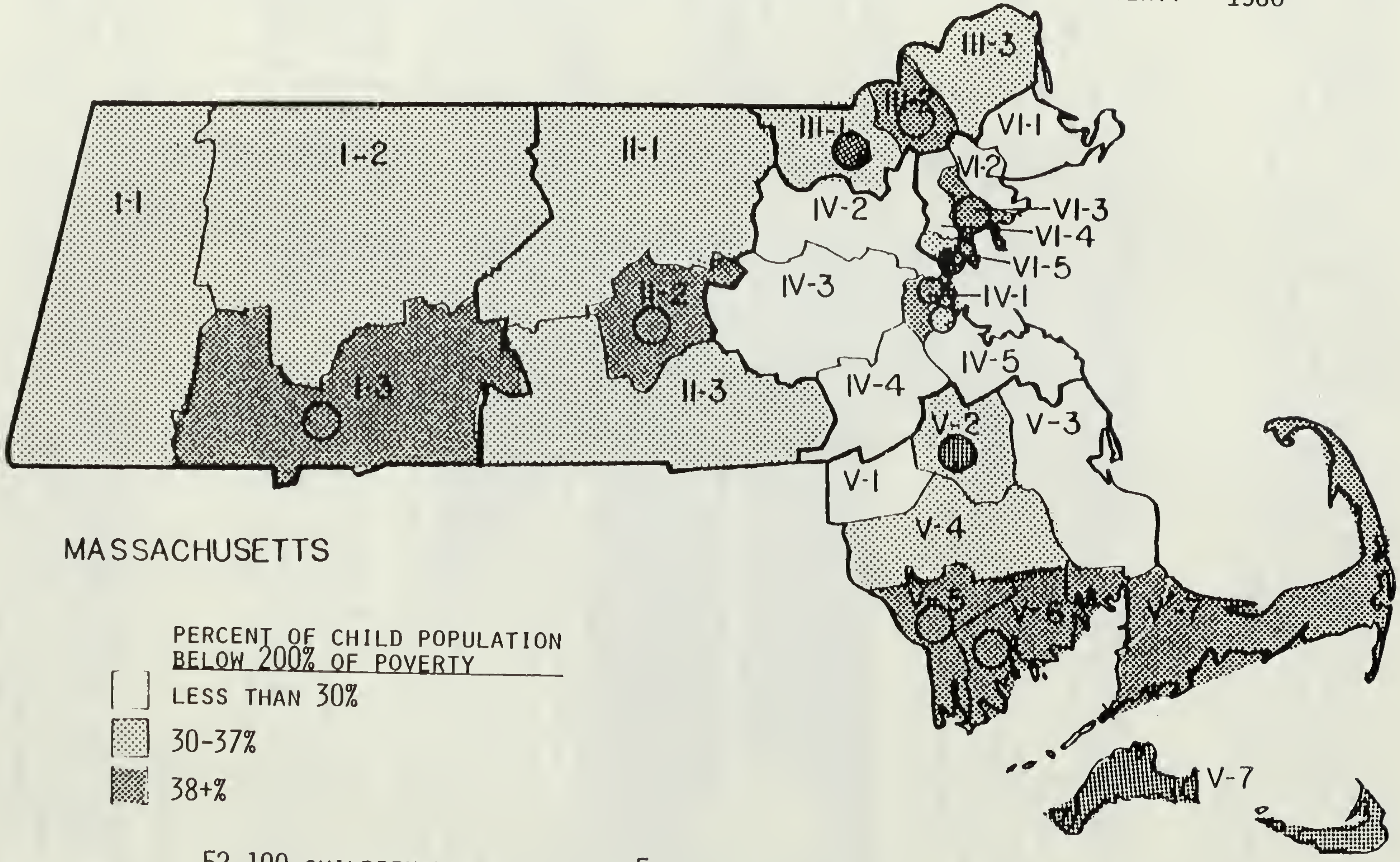
The proportion of hospitalizations reimbursed through Medicaid is also an indicator of poverty. State Rate Setting Commission data for 1982 indicate that 22% of hospitalizations of children under 20 were expected to be covered by Medicaid. Another 7.6% were expected to be self-pay; many of these may also be at or below the poverty line.

Minority Groups

Maternal and child health status among minority populations is poorer than that of the general population, in large part due to restrictions on access to health care because of cultural, racial and economic barriers. While much of the difference in health status between whites and minorities can be explained by economic variables, for some health problems, such as lead poisoning,

Figure 8.

PERCENT OF CHILDREN LESS THAN AGE 5 WHO ARE ESTIMATED TO BE BELOW 200% OF POVERTY - 1980



52,100 CHILDREN LESS THAN AGE 5 ARE BELOW POVERTY

APPROXIMATELY 60,700 CHILDREN LESS THAN AGE 5 ARE BETWEEN 100% AND 200% OF POVERTY

112,800 CHILDREN LESS THAN AGE 5 ARE BELOW 200% OF POVERTY

Table 5

CHILDREN LESS THAN 5 BELOW 100% AND BELOW 200% OF POVERTY

For the 25 Cities with the largest Child Populations in Massachusetts

1980

	Children Below 100% Of Poverty		Children Below 200% Of Poverty	
City/Town	Number	Percent	Estimated No.	Percent
Holyoke	1,301	41.0	1,999	62.9
Boston	10,290	34.2	17,495	58.1
Lawrence	1,725	32.6	2,992	56.5
Springfield	3,254	30.9	5,618	53.3
New Bedford	1,849	27.2	3,664	53.9
Lynn	1,341	26.8	2,427	48.4
Worcester	2,461	25.7	4,513	47.1
Fitchburg	649	25.6	1,207	47.6
Fall River	1,536	24.3	3,437	54.5
Lowell	1,542	22.3	3,063	44.3
Pittsfield	706	22.3	1,351	42.7
Haverhill	669	21.5	1,326	42.6
Cambridge	840	21.4	1,709	43.5
Brockton	1,481	21.2	2,972	42.5
Somerville	756	18.9	1,667	41.8
Taunton	547	17.8	1,176	38.3
Quincy	624	16.3	1,282	33.4
Chicopee	538	16.2	1,219	36.6
Malden	436	15.0	1,004	34.5
Waltham	369	13.4	770	29.0
Medford	369	13.4	809	29.3
Weymouth	361	12.5	803	27.8
Framingham	371	10.8	774	22.6
Plymouth	303	10.2	898	30.1
Newton	194	5.2	548	14.8
MASSACHUSETTS	52,119	15.5	112,798	33.5

minorities experience a higher incidence regardless of income level. The largest minority groups in Massachusetts are blacks and Hispanics. Their distribution statewide is considerably different. Both groups tend to be heavily concentrated in urban areas (Figure 9). The majority of black children live in the eastern part of the state, with the largest number in Boston (Table 6). Hispanic children are more heavily concentrated in the central and western part of the state than are blacks (Table 7). Springfield, Holyoke, and Worcester all have large Hispanic populations.

The third largest minority group in Massachusetts is the Chinese. The 1980 census estimated that there were 1,724 Chinese children under age five and 5,599 age 5 through 19. Almost half of this population resides in Boston with an additional 15% residing in the surrounding communities of Cambridge, Newton and Brookline.

Refugee populations have been growing steadily in Massachusetts, particularly since 1980. The Massachusetts Office of Refugee Resettlement estimates there are now 18,650 refugees in the state, compared to the 2,500 reportedly in the state in 1979. The majority of these refugees are Southeast Asian; 79% of refugee arrivals in the state in FFY'83 were from Kampuchea, Vietnam and Laos, and 90% of the caseload for the state's Refugee Cash and Medical Assistance Program was Southeast Asian in April 1984. 10,900 Southeast Asians reside in the greater Boston area. Refugees entering the United States since 1975 have a median age of 20 years. Data on 1983 arrivals in the state, which closely parallels age distribution of all Southeast Asian refugees settled in the country, indicates that 15.5% are under age five, another 12.6% are between the ages of 6 and 11, and 13.3% are between the ages of 12 and 17. Over 47% of females are between the ages of 18 and 44.

The 1983 Massachusetts Nutrition Survey found that Asian children, including refugees, were at particularly high risk for malnutrition; 15.7% had height-for-age levels below the fifth percentile of national norms, and 11.8% had weight-for-height levels below the fifth percentile. The rate of undernutrition was significantly greater for Southeast Asian children than for other racial groups in the sample. Other health problems identified in this population include intestinal parasites, tuberculosis, iron-deficiency anemia, hepatitis B and dental caries.

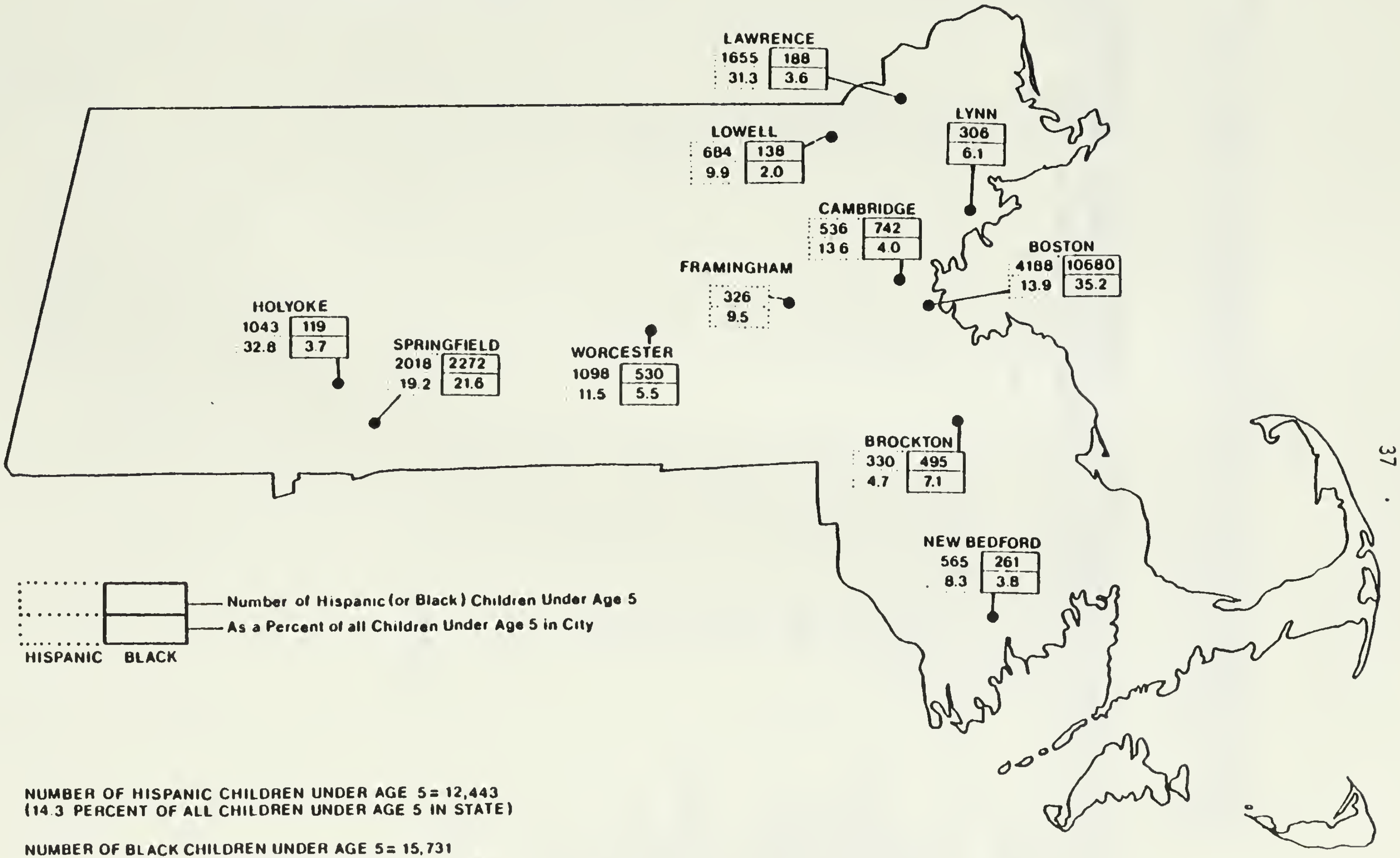
Southeast Asian refugees come from war-torn countries where poor sanitation, lack of adequate medical care and limited access to food all contributed to poor nutritional status. Once in the United States, many of these refugees live in crowded conditions, have limited financial support and can't rely on familiar foods and traditional methods of procurement of food, such as fishing and gardening.

WIC Program providers have found that Southeast Asian women who become pregnant have short interconceptual periods, iron-deficiency anemia and poor weight gain. Many have also experienced miscarriage and one or more of their children may have died. Infants tend to be

Figure 9

CITIES WITH THE LARGEST POPULATIONS OF BLACK & HISPANIC CHILDREN UNDER AGE 5

Massachusetts 1980



NUMBER OF HISPANIC CHILDREN UNDER AGE 5 = 12,443
(14.3 PERCENT OF ALL CHILDREN UNDER AGE 5 IN STATE)

NUMBER OF BLACK CHILDREN UNDER AGE 5 = 15,731
(17.8 PERCENT OF ALL CHILDREN UNDER AGE 5 IN STATE)

HISPANIC = SPANISH ORIGIN (ANY RACE)

Table 6

TOP 10 CITIES WITH THE LARGEST POPULATION OF BLACK CHILDREN LESS THAN AGE 5 IN MASSACHUSETTS - 1980

	Number Black Children Less Than Age 5	Black Children In City As A % Of All Black Children In State	Black Children In City As A % Of All Children In City
MASSACHUSETTS	18,658	100.00	100.00
1 - Boston	10,680	57.2	35.2
2 - Springfield	2,272	12.2	21.6
3 - Cambridge	742	4.0	18.9
4 - Worcester	530	2.8	5.5
5 - Brockton	495	2.7	7.1
6 - Lynn	306	1.6	6.1
7 - New Bedford	261	1.4	3.8
8 - Lawrence	188	1.0	3.6
9 - Lowell	138	0.7	2.0
10 - Holyoke	119	0.6	3.7
	15,731	84.3	17.8

Table 7

TOP 10 CITIES WITH THE LARGEST POPULATION OF CHILDREN OF SPANISH ORIGIN LESS THAN AGE 5 IN MASSACHUSETTS - 1980

	# Spanish Origin Children Less Than Age 5	Spanish Origin Children In City As A % Of All Spanish Children In State	Spanish Origin Children As A % Of All Children In City
STATE	17,900	100.0	100.0
1 - Boston	4,188	23.4	13.9
2 - Springfield	2,018	11.3	19.2
3 - Lawrence	1,655	9.2	31.3
4 - Worcester	1,098	6.1	11.5
5 - Holyoke	1,043	5.8	32.8
6 - Lowell	684	3.8	9.9
7 - New Bedford	565	3.2	8.3
8 - Cambridge	536	3.0	13.6
9 - Brockton	330	1.8	4.7
10 - Framingham	326	1.8	9.5
	------	----	----
	12,443	69.5	14.3

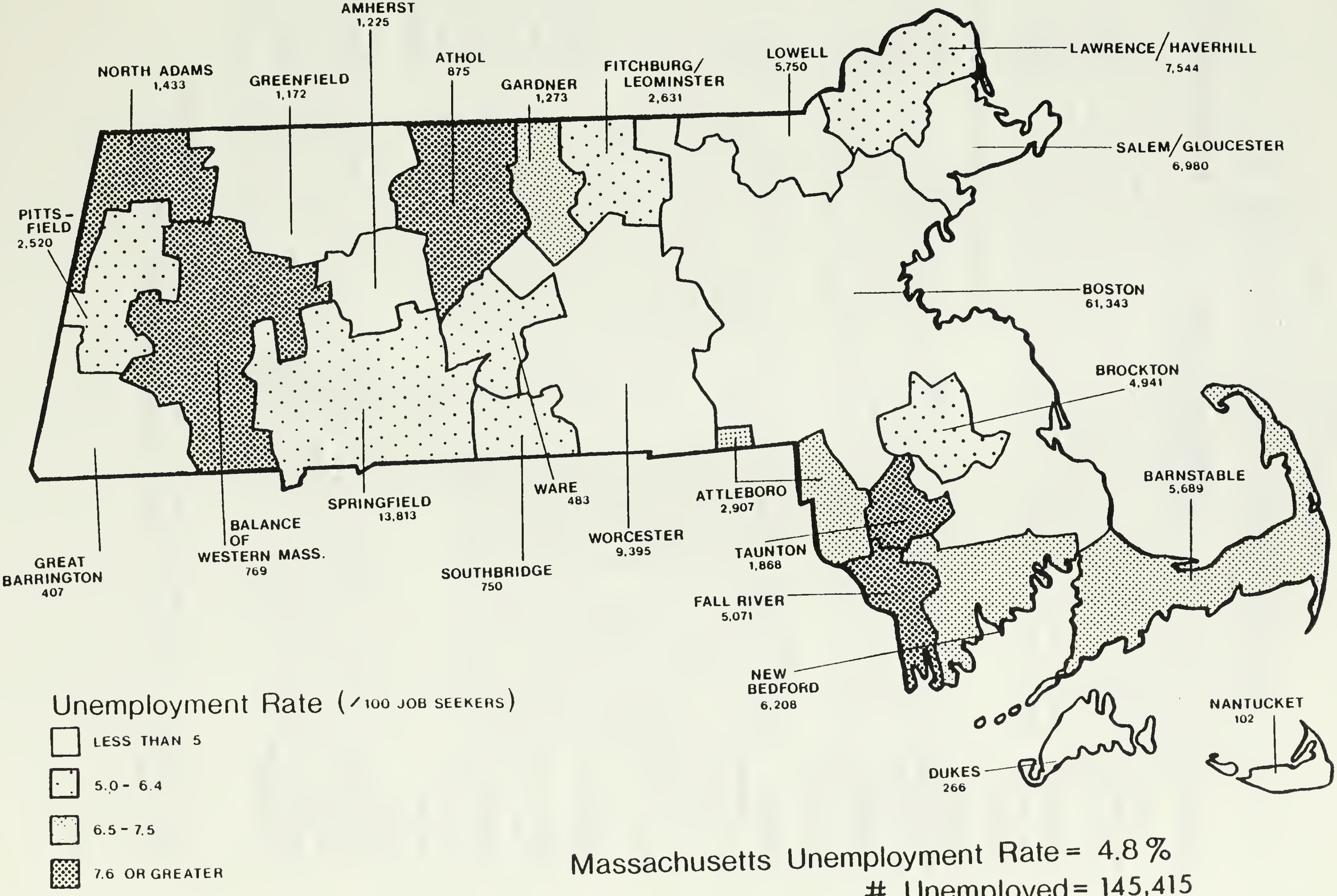
weaned early from breast to formula and often develop problems of severe dental caries and nutrient deficiencies as a result. Southeast Asian refugees are also vulnerable to the effects of mass advertising, and consequently develop some food habits which can be detrimental to their health.

Unemployment

The unemployment rate is important as a population indicator because people out of work are often not eligible for Medicaid and other forms of public assistance. Simultaneously, they are not able to afford payments for health insurance. Sustained high rates of unemployment or large numbers of long-term unemployed people indicate the possibility of future health problems. The ability to afford adequate prenatal care is of particular concern with respect to maternal and child health. Rates of child abuse, and infant and neonatal mortality may be affected as well.

In Massachusetts, the unemployment rate declined from 6.9% (205,337) of the population in 1983 to 4.8% (145,000) in 1984. Unemployment remains relatively high in southeastern (New Bedford, Fall River, Taunton, and Brockton) and western (North Adams and Athol) Labor Market Areas of the state (Figure 10). The City of Boston continues to have the highest number of unemployed in the state (Table 8).

FIG. 10 UNEMPLOYMENT RATE BY MASSACHUSETTS LABOR MARKET AREA- 1984



Massachusetts Unemployment Rate = 4.8 %
Unemployed = 145,415

Table 8

1984 UNEMPLOYMENT RATE FOR THE 25 CITIES WITH THE LARGEST POPULATIONS OF CHILDREN UNDER AGE 5

City/Town	Unemployment Rate Period Job Seekers	Number Unemployed
New Bedford	8.6	4109
Fall River	8.4	3512
Taunton	7.5	1561
Fitchburg	7.4	1365
Lawrence	7.0	2283
Brockton	6.6	3007
Springfield	6.5	4828
Plymouth	6.5	1084
Holyoke	6.3	1302
Haverhill	5.9	1517
Pittsfield	5.7	1693
Boston	5.5	15944
Worcester	5.4	4209
Chicopee	5.2	1551
Massachusetts	4.8	145000
Lowell	4.7	2670
Lynn	4.5	1748
Somerville	4.5	1896
Malden	4.4	1220
Weymouth	4.4	1335
Medford	4.1	1260
Quincy	4.1	1880
Cambridge	4.0	2220
Waltham	3.1	1031
Newton	2.9	1387
Framingham	2.8	1088

Data Source: Division of Health Statistics and Research, MDPH
Prepared By: Division of Family Health Services, MDPH

0112A

2. HEALTH STATUS INDICATORS

Health status indicators include a variety of measures used to assess the significance and location of known health problems. Low-birthweight rates, neonatal and infant mortality rates, and mortality rates for children and youth are reliably reported and widely comparable to national statistics. Other health status indicators discussed in this document are congenital anomaly rates, incidence of lead paint poisoning, nutritional status and childhood injuries. The data for this latter group of health status indicators are either not based on statewide statistics or are believed to be less-reliably reported. Many of these rates can be extrapolated from sample statistics or indirectly estimated.

Infant and Neonatal Mortality

The rates of neonatal and infant mortality are good indicators of maternal and child health problems as well as the overall health of a community or population. The neonatal mortality rate (NMR) measures the number of deaths of infants less than 28 days old per 1,000 live births. The infant mortality rate (IMR) is the number of deaths of infants less than one year old per 1,000 live births.

In 1983, there were 682 infant deaths in Massachusetts, resulting in an IMR of 9.0; 483 of these were neonatal deaths, for a NMR of 7.1 (Table 9). Between 1981 and 1982, infant and neonatal deaths increased significantly. The IMR rose from 9.6 in 1981 to 10.1 in 1982, which was the first increase in nine years and the largest increase in seventeen years. The NMR also rose from 6.9 in 1981 to 7.6 in 1982. The rates for 1983 suggest that the overall decline in the state rate as witnessed over the past decades is continuing. The factors behind the increase in IMR and NMR in 1982 are complex. Since poverty, stress, lack of resources or access to sufficient food and medical care are associated with infant mortality, increased unemployment and cutbacks in federal health and human services in 1982 may have led to the increase. Similarly, recent increased state support for a variety of programs that contribute to improved maternal and child health, as well as overall improvement in the state's economy, may be associated with the apparent continuing decline in the IMR.

The 1983 Massachusetts IMR of 9.0/1000 live births is considerably lower than the provisional, national rate of 10.9/1000 live births and meets the Surgeon General's 1990 objective for the nation. However, Massachusetts and especially the U.S. continue to have higher IMRs than many other industrialized nations (Table 10). Sweden, for example, had a 1982 IMR of 6.8 - roughly 30% lower than the Massachusetts rate and 40% below the U.S. rate.

Table 9

RESIDENT INFANT AND NEONATAL DEATHS

1940 - 1983

	DEATHS UNDER 1 YEAR		DEATHS UNDER 28 DAYS	
Year	Number	Per 1,000 Live Births	Number	Per 1,000 Live Births
1940	2,450	37.5	1,655	25.3
1950	2,277	23.8	1,750	18.3
1960	2,492	22.2	1,571	16.4
1970	1,583	16.9	1,231	13.1
1971	1,462	16.8	1,130	13.0
1972	1,164	15.1	896	11.6
1973	1,104	15.2	861	11.9
1974	976	13.9	763	10.8
1975	903	13.2	678	9.9
1976	799	12.1	585	8.9
1977	806	11.8	616	9.1
1978	753	11.0	552	8.1
1979	759	10.8	563	8.0
1980	748	10.3	550	7.5
1981	710	9.6	510	6.9
1982	764	10.1	573	7.6
1983	682	9.0	483	7.1

Table 10

INFANT MORTALITY RATES
FOR SELECTED COUNTRIES
1982

Country	IMR
Finland	6.0
Japan	6.6
Sweden	6.8*
Switzerland	7.7*
Norway	8.1
Denmark	8.2
Netherlands	8.3
Canada	9.1
France	9.3*
Spain	9.6
Hong Kong	9.9
Massachusetts	10.1
Australia	10.3*
Ireland	10.5*
Singapore	10.7*
German Federal Republic	10.9
United Kingdom	11.0*
United States	11.2*
German Democratic Republic	11.4
Belgium	11.7*
New Zealand	11.8*
Italy	12.7*
Austria	12.8*
Israel	13.9
Greece	14.3*
Czechoslovakia	16.2*

*Provisional

Data source: United Nations Statistical Office

While the overall IMR has generally been declining, large racial differences persist in both Massachusetts and the U.S. The black IMR (19.5 in 1983) is more than double the white IMR (8.5 in 1983). (See Figure 11.) The disparity in IMR for blacks and other nonwhite populations is paralleled in virtually every other health-status indicator and shows the need for continued improvement in maternal and child health services to these groups.

There is a great deal of geographic variation in infant mortality rates across the state (Figure 12). In 1982, three HSA subareas (HSA I-3, III-3, and IV-1) had IMRs greater than one standard deviation above the state mean.

Within HSA subareas, cities frequently stand out with much higher rates than the surrounding region. Tables 11 and 12 show the IMR and NMRs for cities with large populations of children. Both five-year averages and single-year rates are shown. Springfield, Holyoke, Boston, and Haverhill have consistently had very high infant and neonatal mortality rates during the past five years. These rates must be interpreted cautiously, as the actual number of deaths is often quite small, and rates may fluctuate a great deal from year to year.

Boston is an area of particular concern since it has more infant deaths than any other city in the Commonwealth. In 1983 the IMR in Boston was 11.5 compared with 9.0 for Massachusetts. variations in infant mortality within Boston neighborhoods reflect the variations across Massachusetts communities. (Table 13)

Low Birthweight

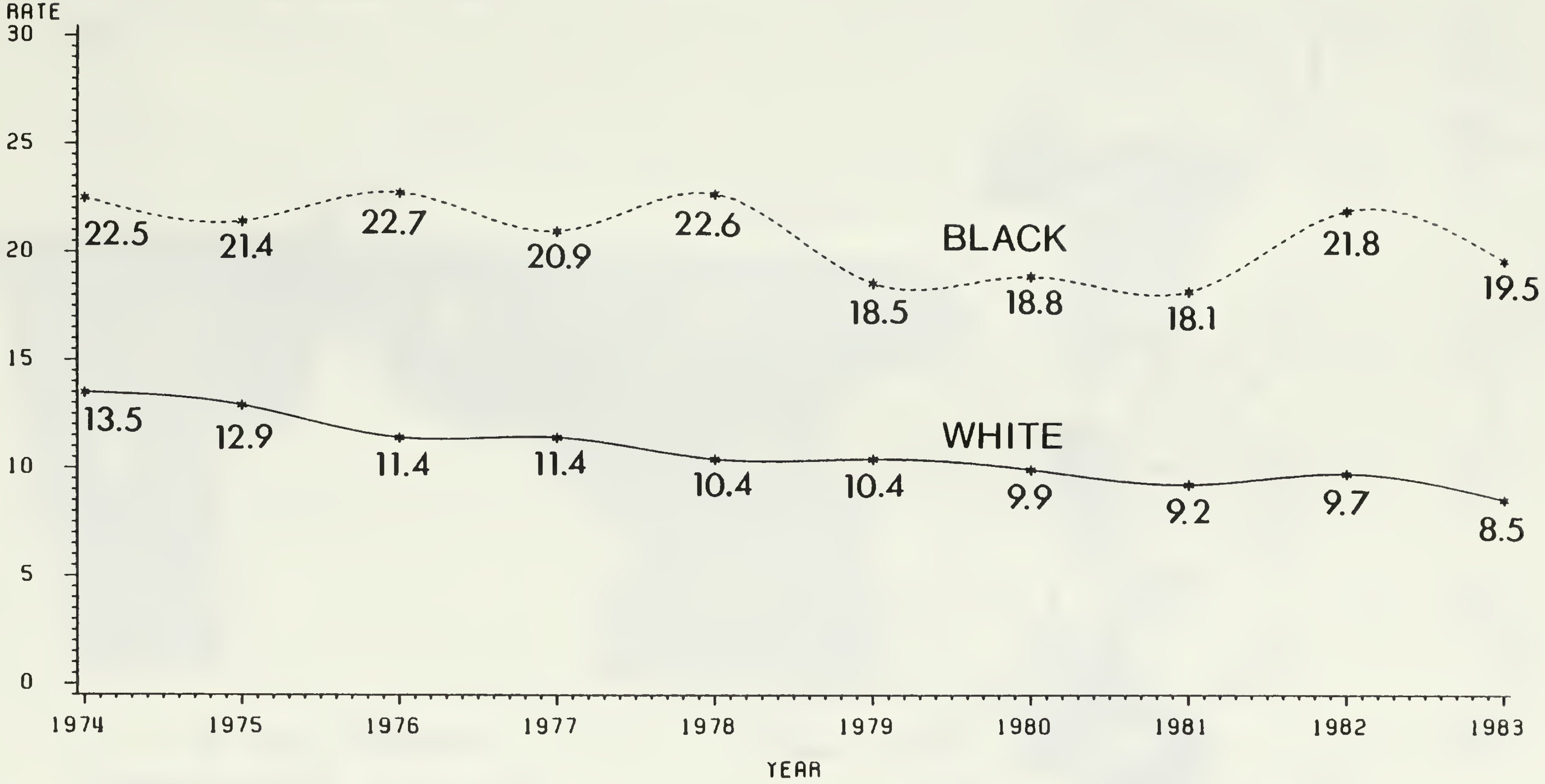
Low birthweight (LBW) is associated with a variety of factors affecting maternal and child health including race, age of mother, smoking, nutritional status, and the adequacy of prenatal care. Low birthweight babies (those less than 2501 grams) have a much higher risk of morbidity and mortality than normal birthweight babies. The neonatal mortality rate in Massachusetts for LBW babies was 87.6 per 1000 live births for the period 1979-83, as compared to 1.6/1000 for normal birthweight (2500-4500 grams) babies. The mortality rate rises dramatically for very low birthweight babies, 419.8 per 1,000 live births under 1500 grams. (See Table 14.)

Low birthweight rates in Massachusetts have declined slowly from 7.4/100 in 1970 to 5.9/100 in 1983. In 1983, there were 4,461 LBW babies. There is some variation statewide and LBW births generally account for about 6% of all births (Figure 13).

Much of the statewide variation in LBW rates is a result of economic and social conditions. Minorities and the poor are at much higher risk of having LBW babies. The low birthweight rate for blacks in 1983 (12.3 per 100 live births) was more than twice the rate for whites (5.4), (Figure 14) and showed an increase from the 1982 rate of 11.6.

FIGURE 11

INFANT MORTALITY RATES BY RACE
MASSACHUSETTS 1974–1983

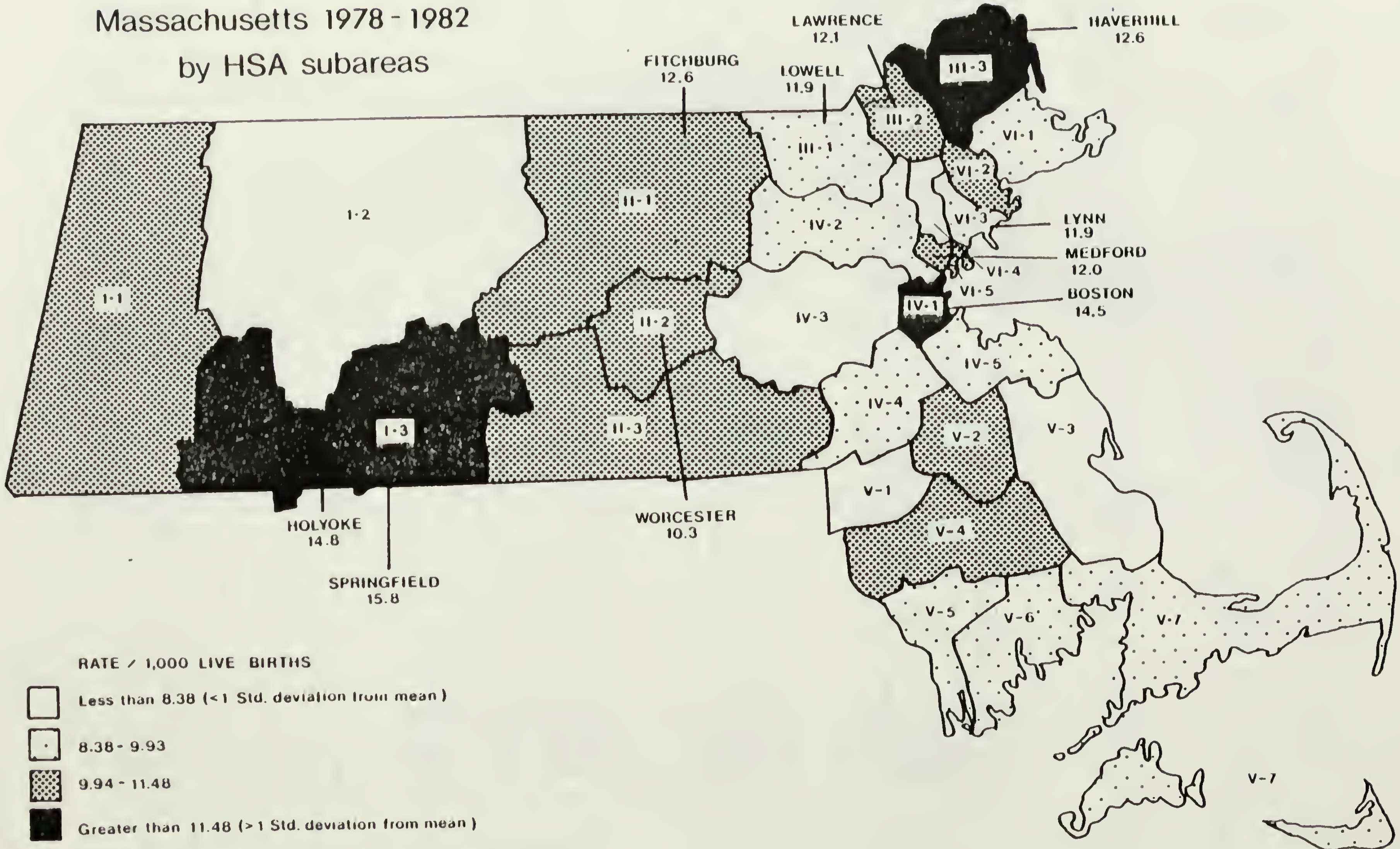


IMR=DEATHS UNDER 1 YEAR/1000 LIVE BIRTHS

DATA SOURCE: DIVISION OF HEALTH STATISTICS AND RESEARCH,MDPH
PREPARED BY: DIVISION OF FAMILY HEALTH SERVICES,MDPH

Figure 12

INFANT MORTALITY RATE
Massachusetts 1978 - 1982
by HSA subareas



IMR for state = 10.3 / 1,000 live births

Data Source: Division of Health Statistics and Research, MDPH
Prepared by: Division of Family Health Services, MDPH

Table 11
INFANT MORTALITY RATE
FOR 25 LARGEST CITIES IN MASSACHUSETTS
(Based on number of births)

	5 Year IMR		1 Year IMR		Number of Infant Deaths	
City	1979-83	1978-82	1983	1982	1983	1982
Springfield	15.7	15.8	12.1	15.0	30	37
Holyoke	15.7	14.8	13.8	10.5	10	8
Haverhill	14.0	12.6	21.9	17.5	16	13
Boston	13.6	14.5	11.5	15.8	96	132
Lawrence	11.8	12.1	6.8	16.8	9	21
Fitchburg	11.6	12.6	6.7	15.8	4	9
Brockton	11.6	11.3	10.3	8.2	17	13
Malden	11.5	11.5	11.0	10.5	8	7
Worcester	11.3	11.8	11.2	11.2	26	26
New Bedford	11.3	11.2	11.2	14.3	16	22
Chicopee	10.8	10.1	13.0	12.5	9	9
Lowell	10.7	11.9	10.8	9.2	17	15
Medford	10.4	12.0	4.4	23.2	3	15
Lynn	10.3	11.9	9.5	9.9	12	13
Massachusetts	9.9	10.3	9.0	10.1	682	764
Fall River	9.0	10.2	7.5	9.9	10	13
Somerville	8.9	9.0	9.4	3.0	9	3
Quincy	8.8	9.6	7.7	10.1	8	10
Waltham	8.8	8.1	10.9	7.8	7	5
Plymouth	8.7	7.0	10.8	8.5	6	5
Taunton	8.5	9.5	5.9	8.6	4	6
Framingham	8.2	8.6	6.7	5.9	5	4
Cambridge	7.8	9.4	2.8	7.9	9	8
Pittsfield	7.7	8.9	8.8	7.5	6	5
Weymouth	7.7	6.9	10.2	3.0	7	2
Newton	6.2	6.2	10.3	4.8	9	4

Data Source: Division of Health Statistics and Research, MDPH

Prepared By: Division of Family Health Services, MDPH

Table 12
NEONATAL MORTALITY RATE
FOR 25 LARGEST CITIES IN MASSACHUSETTS
(Based on number of births)

City	5 Year NMR		1 Year NMR		Number of Neonatal Deaths	
	1979-83	1978-82	1983	1982	1983	1982
Springfield	12.1	12.2	8.4	12.6	21	31
Holyoke	11.8	10.3	12.5	7.9	9	6
Malden	9.7	9.9	8.2	7.5	6	5
Boston	9.5	10.4	8.4	11.5	70	96
Haverhill	9.5	8.9	11.0	12.1	8	9
New Bedford	9.2	9.1	8.4	13.0	12	20
Medford	9.1	11.0	1.5	23.2	1	15
Worcester	8.8	9.2	6.9	8.2	16	19
Lawrence	8.7	8.5	6.0	10.4	8	13
Brockton	8.4	8.4	4.8	7.5	8	12
Lynn	7.5	8.5	6.3	9.1	8	12
Chicopee	7.5	7.0	8.7	8.3	6	6
Fitchburg	7.3	8.1	5.0	8.8	3	5
Massachusetts	7.3	7.6	6.4	7.6	483	573
Somerville	6.8	6.6	8.4	3.0	8	3
Lowell	6.7	7.2	7.6	4.3	12	7
Waltham	6.3	5.9	6.2	6.2	4	4
Cambridge	6.2	6.9	2.8	5.9	3	6
Fall River	6.0	6.8	6.0	5.3	8	7
Framingham	6.0	6.1	5.4	5.9	4	4
Taunton	5.9	6.5	3.0	5.7	2	4
Quincy	5.9	6.4	5.8	6.0	6	6
Pittsfield	5.6	7.4	4.4	5.7	3	4
Plymouth	5.6	4.2	7.2	3.4	4	2
Weymouth	5.5	5.6	5.8	3.0	4	2
Newton	4.7	5.4	5.7	3.6	5	3

Data Source: Division of Health Statistics and Research, MDPH

Prepared By: Division of Family Health Services, MDPH

Table 13

INFANT MORTALITY RATES AND LOW BIRTHWEIGHT RATES

BY BOSTON NEIGHBORHOOD

Neighborhood	Infant Mortality Rate 1978-1982	Low Birthweight Rate 1978-1982	Number Births 1983	Number Infant Deaths 1983	Number Births Less Than 2500 Grams - 1983
Roxbury (801-821)	20.3	120.5	1146	15	136
Mattapan/Neponset (1001-1011)	18.7	98.6	1197	17	129
South Dorchester (901-903, 916-924)	18.2	111.7	1046	14	99
North Dorchester (904-915)	14.2	88.8	627	5	68
Hyde Park (1401-1404)	14.0	66.8	488	9	38
Jamaica Plain (1201-1207)	13.3	75.5	492	6	49
South End (701-712)	13.1	81.1	408	2	47
Boston Proper (101-305)	12.9	72.0	416	8	23
East Boston (501-512)	10.5	70.6	461	6	28
South Boston (601-614)	9.2	67.6	414	6	31
Charlestown (401-408)	8.5	58.5	188	1	5
Brighton/Allston (001-008)	8.2	57.0	650	3	37
West Roxbury (1301-1304)	7.4	39.5	277	2	9
Roslindale (1101-1106)	7.2	65.8	503	2	28
BOSTON	14.5	86.8	8316	96	727

Data Source: Division of Health Statistics and Research, Department of Public Health

Prepared By: Division of Family Health Services, Department of Public Health

Table 14

DISTRIBUTION OF BIRTHS AND NEONATAL MORTALITY RATE BY BIRTHWEIGHT

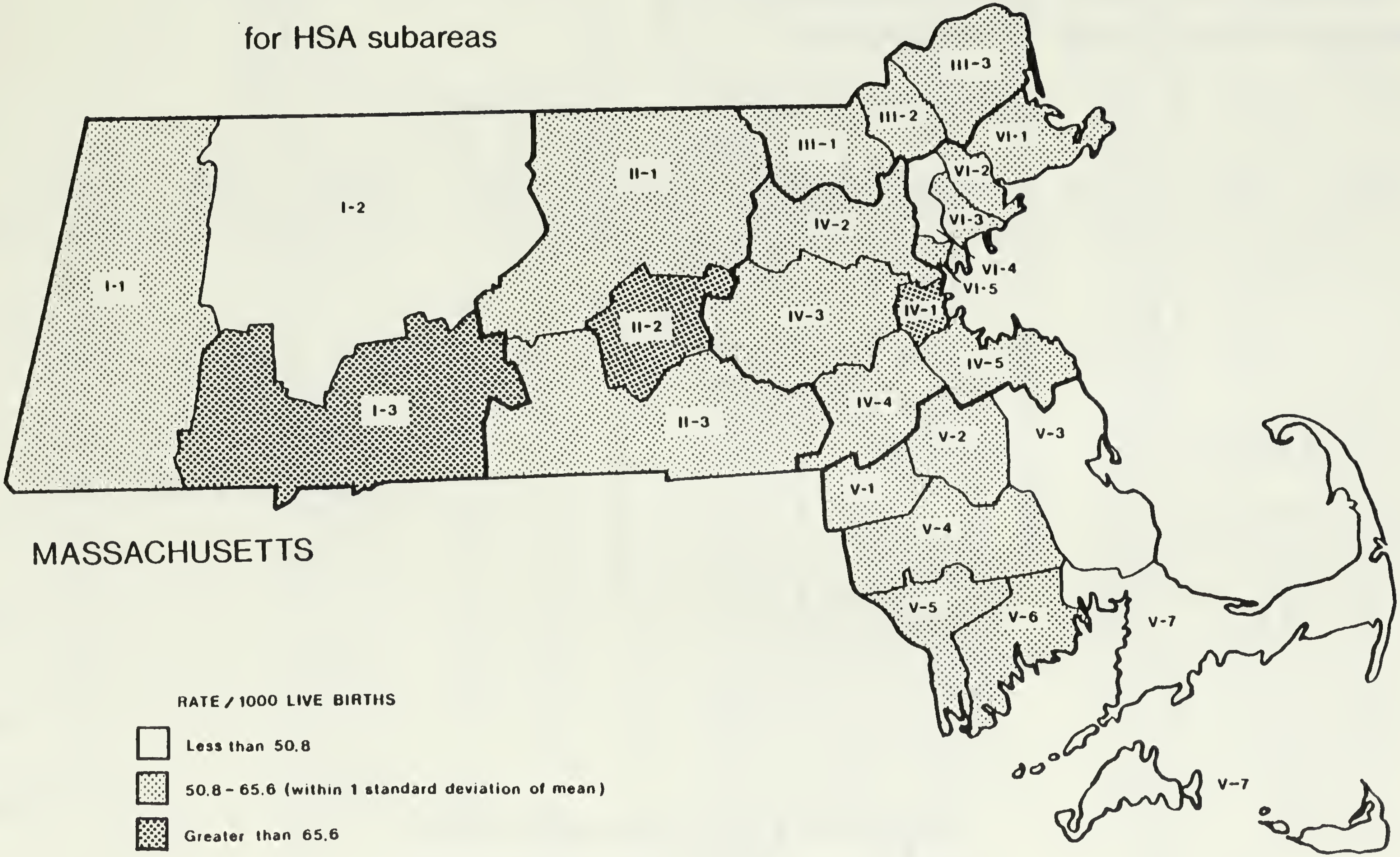
MASSACHUSETTS 1979-83

Birthweight	Proportion Of Births	Neonatal Mortality Rate
< 1500 grams	1.0	419.8
1500-1999	1.1	40.9
2000-2499	3.8	11.9
2500-3999	82.7	1.6
4000-4500	9.3	1.2
> 4500 grams	2.0	2.2
Unknown	0.1	342.0

Figure 13

LOW BIRTH WEIGHT RATE 1978-1982

for HSA subareas



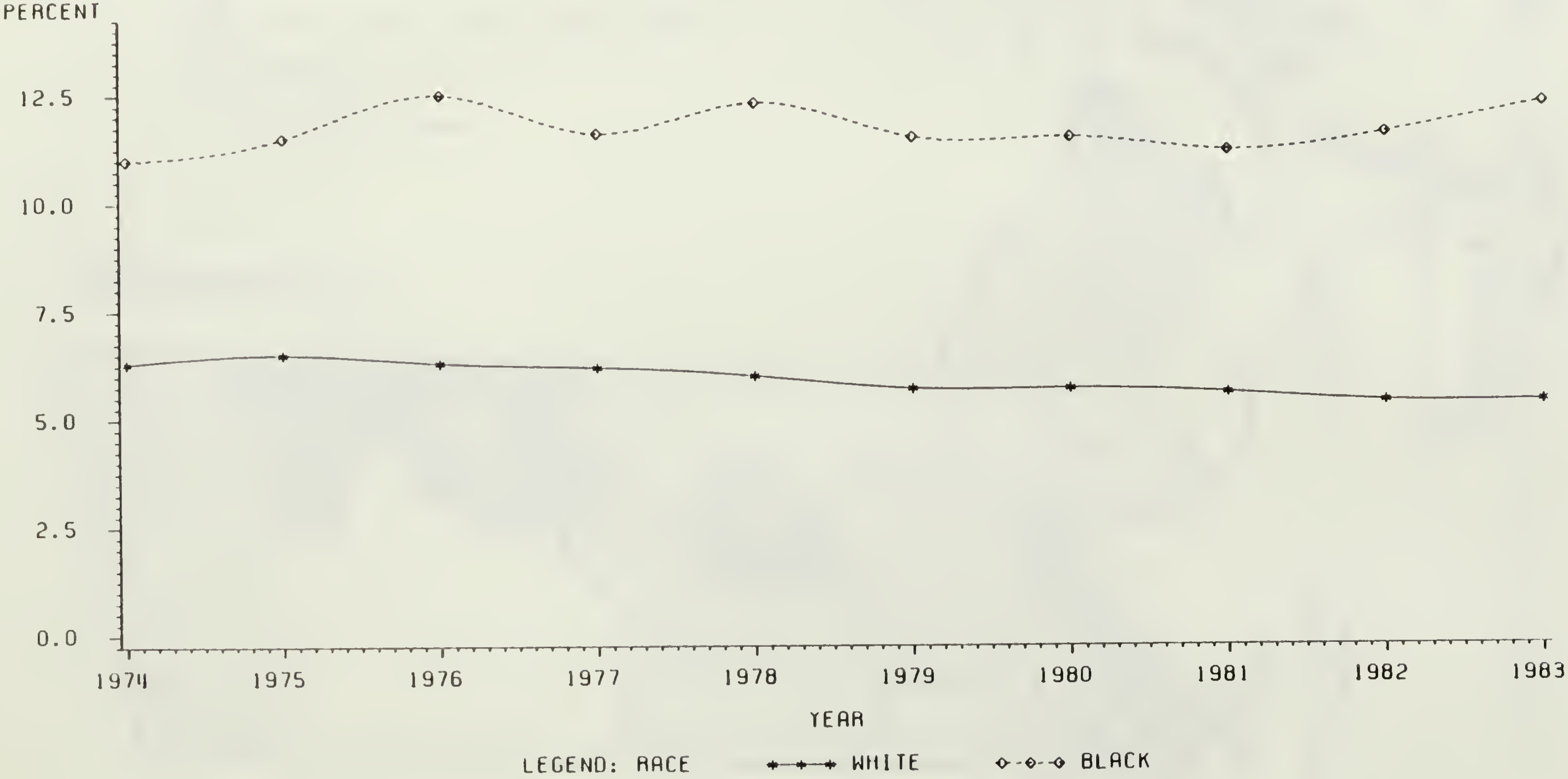
State rate = 60.9/1000 live births

Figure 14

LOW BIRTHWEIGHT RATES BY MATERNAL RACE

MASSACHUSETTS 1974–1983

BIRTHS LESS THAN 2501 GRAMS PER 100 LIVE BIRTHS



DATA SOURCE: DIVISION OF HEALTH STATISTICS AND RESEARCH,DPH

PREPARED BY: DIVISION OF FAMILY HEALTH SERVICES,DPH

The areas with the highest LBW rates (HSA I-3, II-2, and IV-1) generally rank high on other problem indicators as well, such as unemployment rate. The cities with the largest 5-year rates (1979-1983) are Boston (8.6), Holyoke (8.3), Springfield (8.2), Worcester (7.3), Brockton (6.9) and Malden (6.9). New Bedford, Taunton, Lawrence, Lynn, Fall River, Pittsfield, Cambridge, Chicopee, Haverhill and Lowell also have rates in excess of the Massachusetts 5-year low birthweight rate of 6.0 births. (Table 15)

Geographic variations in low birthweight rates are also reflected in Boston neighborhoods. In 1983, the low birthweight rate for Boston was 8.7, exceeding the state rate of 5.9. Several Boston neighborhoods stand out with exceedingly high rates. (Table 13)

Congenital Anomalies and Genetic Diseases

In 1983, 780 congenital anomalies were reported in Massachusetts on birth certificates. This number substantially underestimates the true rate since in many cases congenital anomalies are not noticed until some time after birth. Some hospitals and physicians may be more conscientious about reporting congenital anomalies than others. There is also variation in the severity of disorders reported. Thus the marked statewide variations in congenital anomaly rates probably have little meaning. Table 16 shows the estimated distribution of genetic disease and the number of reported congenital anomalies by HSA. In 1982, 24.8% of all neonatal deaths were due to congenital anomalies, while 16.2% of all deaths in the postneonatal period were due to congential anomalies.

Three broad categories of developmental and genetic disorders can be distinguished:

1. Multifactorial disorders - such as cleft lip, club foot, anencephaly.

2. Inherited traits - such as cystic fibrosis, sickle cell anemia.

3. Chromosomal abnormalities - such as Down's syndrome.

Table 17 shows the estimated extent of some of these disorders. Approximately 1,400 births each year are affected. Another 2,100 children between ages 1 and 9 will be found to have an undiagnosed congenital disorder.

Table 15

LOW BIRTHWEIGHT RATE
FOR THE 25 CITIES WITH THE LARGEST CHILD POPULATION
MASSACHUSETTS

City	5 Year Rate		1 Year Rate		Number of Low Birthweight Births	
	1979-83	1978-82	1983	1982	1983	1982
Boston	8.6	8.7	8.7	8.5	727	711
Holyoke	8.3	8.2	8.3	7.4	60	56
Springfield	8.2	8.0	8.9	8.1	222	199
Worcester	7.3	7.4	7.4	7.8	172	181
Brockton	6.9	7.0	6.6	5.8	109	92
Malden	6.9	6.5	6.9	7.5	50	50
New Bedford	6.7	7.0	6.9	7.2	98	111
Taunton	6.7	6.8	5.9	6.7	40	47
Lawrence	6.6	6.6	6.3	7.6	83	95
Lynn	6.5	6.9	5.2	7.2	67	95
Fall River	6.5	6.8	5.1	5.9	68	78
Pittsfield	6.5	6.8	7.0	4.8	48	32
Cambridge	6.5	6.3	6.5	6.6	69	67
Chicopee	6.3	6.4	5.3	5.7	37	41
Haverhill	6.2	6.8	5.1	5.9	37	44
Lowell	6.1	6.5	5.3	6.6	84	107
Massachusetts	6.0	6.1	5.9	5.9	4461	4447
Somerville	6.0	6.1	4.9	4.5	47	45
Waltham	5.9	6.0	4.5	5.8	29	37
Framingham	5.8	6.2	5.6	4.1	42	28
Fitchburg	5.6	6.4	4.9	4.6	29	26
Quincy	5.5	5.4	5.7	3.7	59	37
Plymouth	5.4	5.3	5.2	6.8	39	40
Medford	5.3	5.9	3.5	5.9	24	38
Weymouth	5.0	4.7	5.8	5.7	40	38
Newton	4.9	4.9	4.3	5.4	38	45

Data Source: Division of Health Statistics and Research, MDPH

Prepared By: Division of Family Health Services, MDPH

0112A

Table 16

ESTIMATED AND REPORTED PREVALENCE OF GENETIC DISEASE AMONG NEWBORNS IN MASSACHUSETTS

HSA	Births in 1981	Estimated Number of Newborns with Genetic Disease*	Congenital Anomalies Reported in 1981**	
			#	Percent of Births
I	10,511	210	257	2.5
II	9,327	187	88	0.9
III	7,273	145	83	1.1
IV	25,020	500	113	0.5
V	14,140	283	94	0.7
VI	7,660	153	62	0.8
STATE	73,931	1,478 (2%)	697	0.9

* This compilation is based upon the data collected from a prospective study by Lewis Holmes of 18,155 newborns at the Boston Hospital for Women (BLI), published by the Massachusetts Developmental Council as a booklet entitled "Malformed Newborn-Practical Perspectives."

** Based on information reported on the Birth Certificate. Much of the difference in rates among HSAs is due to variation in reporting practices by hospitals rather than true geographic differences.

Table 17

ESTIMATED OCCURRENCE OF GENETIC DISEASES IN NEWBORNS IN MASSACHUSETTS

DISORDER	% OF ALL NEWBORNS AFFECTED*	ESTIMATED ANNUAL NUMBER** OF BIRTHS WITH DISORDER
MULTIFACTORIAL DISORDERS		
1) Neural tube defects	0.1	96
2) Cardiac anaomalies	0.3	204
3) Cleft lip and/or palate	0.08	54
4) Club foot	0.1	96
5) Congenital hip dislocation	≤ 0.1	46
6) Other (hypospadias, etc.)	≤ 0.1	50
TOTAL	0.7	546
MENDELIAN INHERITANCE		
1) Autosomal Dominants	0.3	220
2) Autosomal Recessives	≤ 0.1	35
3) X-linked Recessives	≤ 0.1	4
TOTAL	0.4	259
CHROMOSOMAL ABNORMALITIES		
1) Down's Syndrome (trisomy 21)	0.1	77
2) Trisomy 13	≤ 0.1	12
3) Others	≤ 0.1	12
TOTAL	0.2	101
OTHER AND UNKNOWN	0.7	471
GRAND TOTAL	2.0	1377

* Estimates based on data from 18,155 newborns at Boston Hospital for Women.

Source: The Malformed Newborn: Practical Perspectives. 1976 Lewis Holmes, M.D., published by Massachusetts Developmental Disabilities Council.

** Estimate based on 70,000 births per year.

Injuries

Each year there are 380,000 injuries to children and adolescents serious enough to require emergency room treatment. Accidents are the leading cause of disability and death among children over the age of 1. The most common kinds of accidents are similar at all ages, but their relative frequencies vary considerably at different ages (Table 18). Falls are common at all ages but decline in frequency with age. Sports accidents appear in significant numbers at about age 6 and are the leading cause of injury among teenagers (Figure 15).

The rate of accidents rises generally with age, particularly after age 3 (Figure 16). Boys are more likely to be injured than girls. The differential between male and female injury rates increases with age.

Overall, only about 3% of all injuries seen in emergency rooms are serious enough to require hospitalization (Table 18). Here too, there is considerable variation by type of injury. Motor vehicle related accidents, burns, swimming accidents, and fractures all have high hospitalization rates.

Even though accidents are the leading cause of death, mortality from accidents is generally quite low. Motor vehicle related accidents, burns, electrocution, and drowning account for most of the deaths. Less than a tenth of 1 percent of all accidents result in death (Figure 17). Injuries resulting from motor vehicle related accidents are largely to the head and face and often result in epilepsy, spinal cord damage and varying degrees of brain damage.

Data collected through the Massachusetts 1984 Survey of Passenger Restraint Use indicates a steady downward trend of use of child seats and seat belts with increased age (Figure 18).

The preventable nature of most accidents provides a strong basis for the development of programs to assist families and communities in reducing the high rates of injury. The Statewide Childhood Injury Prevention Program and the Massachusetts Passenger Safety Program provide a number of services aimed at achieving this goal.

Childhood Mortality

Mortality rates among children are high at birth, then fall rapidly. They begin to rise significantly in the early teenage years. Most deaths below the age of 1 are the result of congenital defects, Sudden Infant Death Syndrome (SIDS), and a variety of perinatal conditions such as complications of delivery. After age 1, accidents are the leading cause of death for all ages. Motor vehicle accidents (including bicycle, pedestrian and occupant related), in particular, are a major cause of death at ages beyond 1 year. Males are more likely to die than females at each age group.

Table 18

ESTIMATES OF STATEWIDE INJURY FREQUENCY, EMERGENCY ROOM VISITS AND HOSPITALIZATIONS

FIVE MOST COMMON INJURY TYPES BY AGE GROUP

Injury Type	Rate/10,000 Population	Number Of Injuries	Number Seen In Emergency Room	Number* Hospitalized
0-5 Years old - 1980 Population - 404,764 children				
Falls	797.7	32,300	31,100	1,100
Struck by Object	275.2	11,100	11,100	10
Cut by Object	149.7	6,100	6,000	100
Poison	81.4	3,300	3,000	300
Burns	70.1	2,800	2,400	200
Total Injury Rate	1,726.0	70,000		
6-12 Years old - 1980 Population - 576,555 children				
Falls	553.8	32,000	31,000	1,000
Struck by Object	394.8	22,800	22,500	300
Sports	336.8	19,400	18,700	600
Cut by Object	275.6	15,900	15,800	100
Pedal Cycle	122.8	7,100	6,500	500
Total Injury Rate	2,004.0	115,500		
13-19 Years old - 1980 Population - 740,201 children				
Sports	689.7	51,100	50,000	1,500
Struck by Object	409.3	30,300	30,000	400
Cut by Object	384.1	28,400	28,000	400
Falls	348.9	25,800	25,300	500
Motor Vehicle-Occup.	195.5	14,500	13,000	1,500
Total Injury Rate	2,659.0	196,800		
OVERALL INJURY RATE	2,220.3			

TOTAL NUMBER OF INJURIES IN MASSACHUSETTS ANNUALLY = 380,000

NOTE: Estimates projected from SCIPP data and 1980 U.S. Census.
All numbers rounded to nearest 10 or 100.

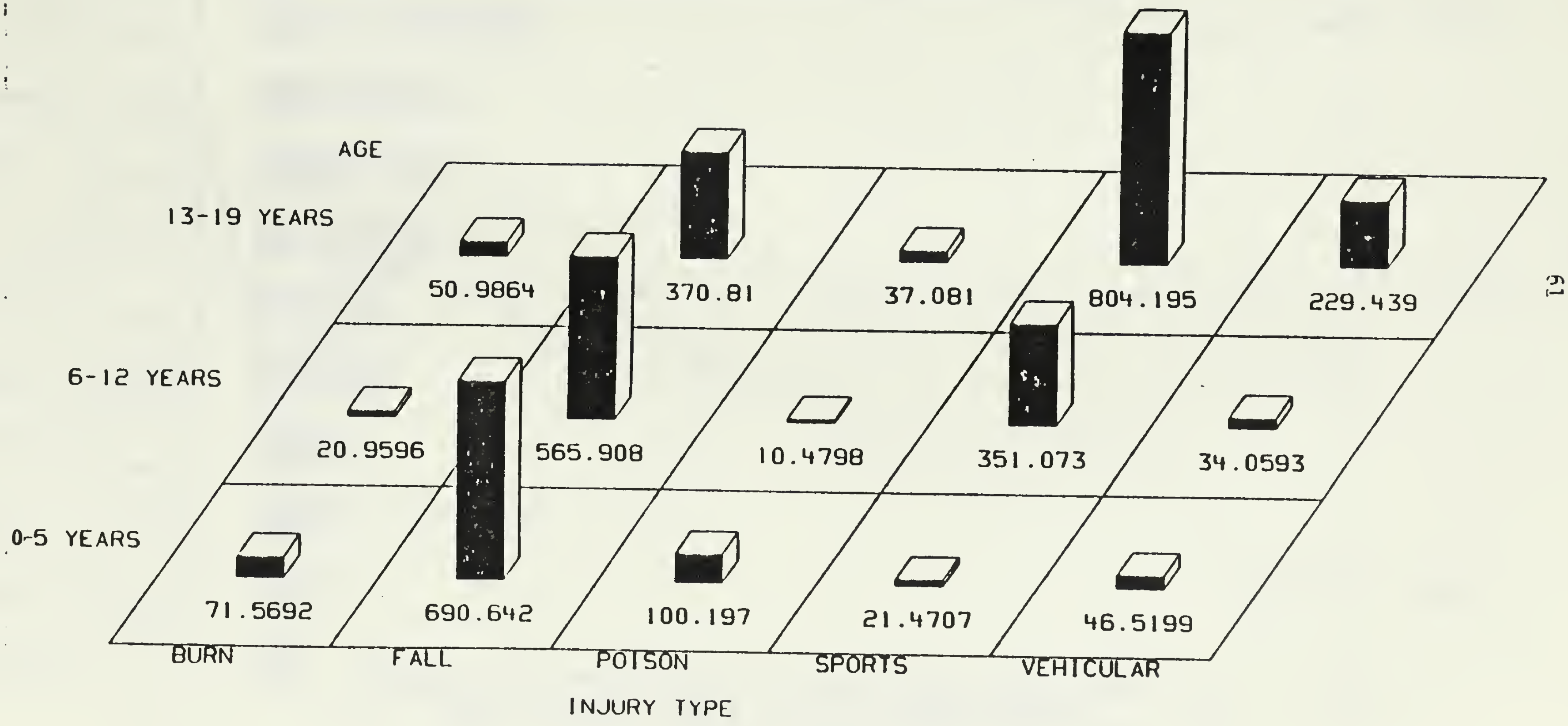
* Because of rounding, Numbers Hospitalized and Numbers Seen In Emergency Rooms do not always equal the total number of injuries.

Figure 15.

INJURY RATES BY AGE GROUP

EMERGENCY ROOM VISITS - ANNUAL RATE PER 10,000

BLOCK CHART OF RATE



RATES BASED ON A 1/8 SAMPLE OF ANNUAL VISITS

Figure 16

INJURY RATES

AGE AND SEX DISTRIBUTION

EMERGENCY AND ADMISSION RATES PER 10,000 CHILD-YEARS

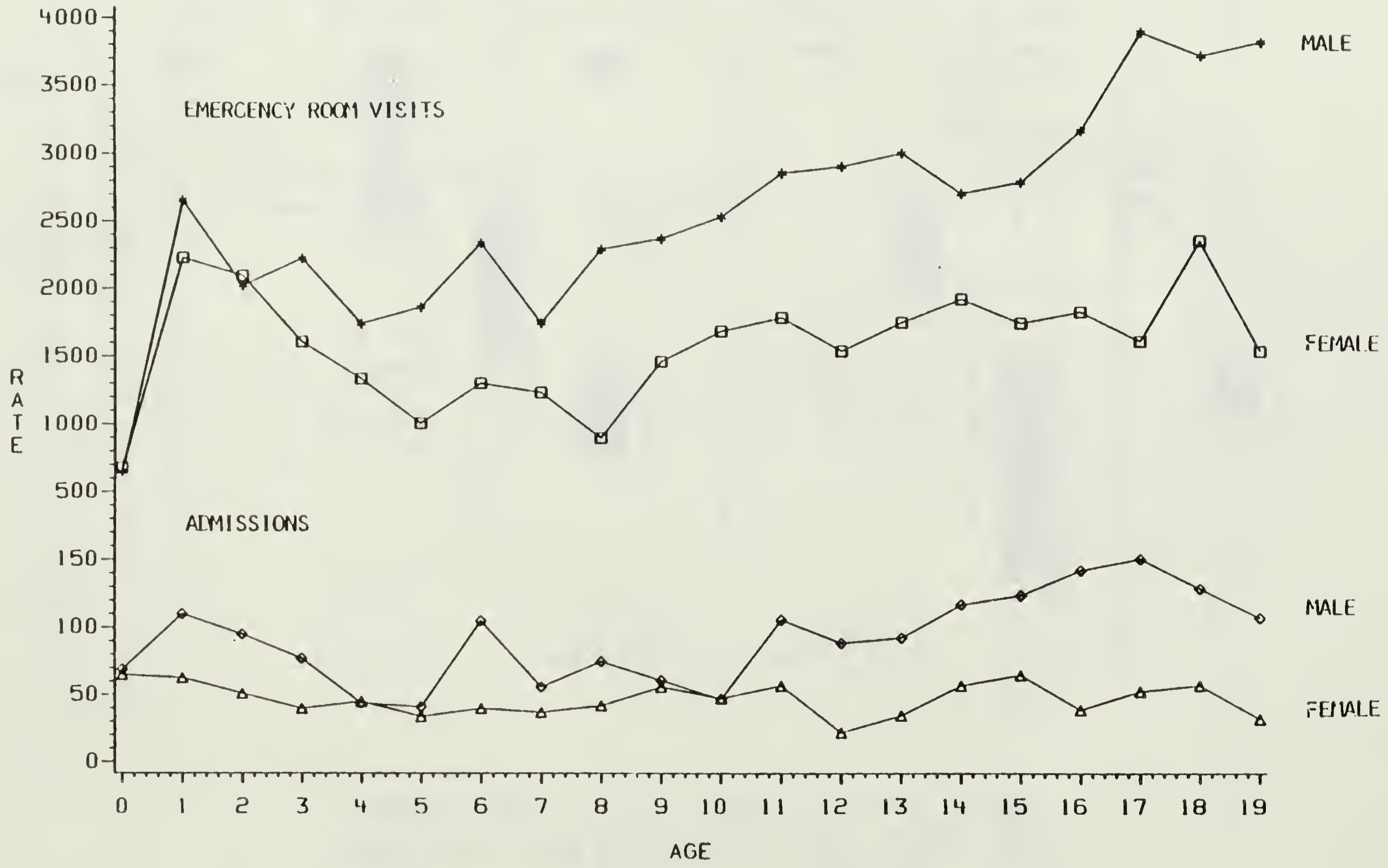


Figure 17.

ACCIDENTAL DEATHS – SELECTED CAUSES

CHILDREN 0-19 YEARS OLD
MASSACHUSETTS RESIDENTS: 1975-1980 AGGREGATED

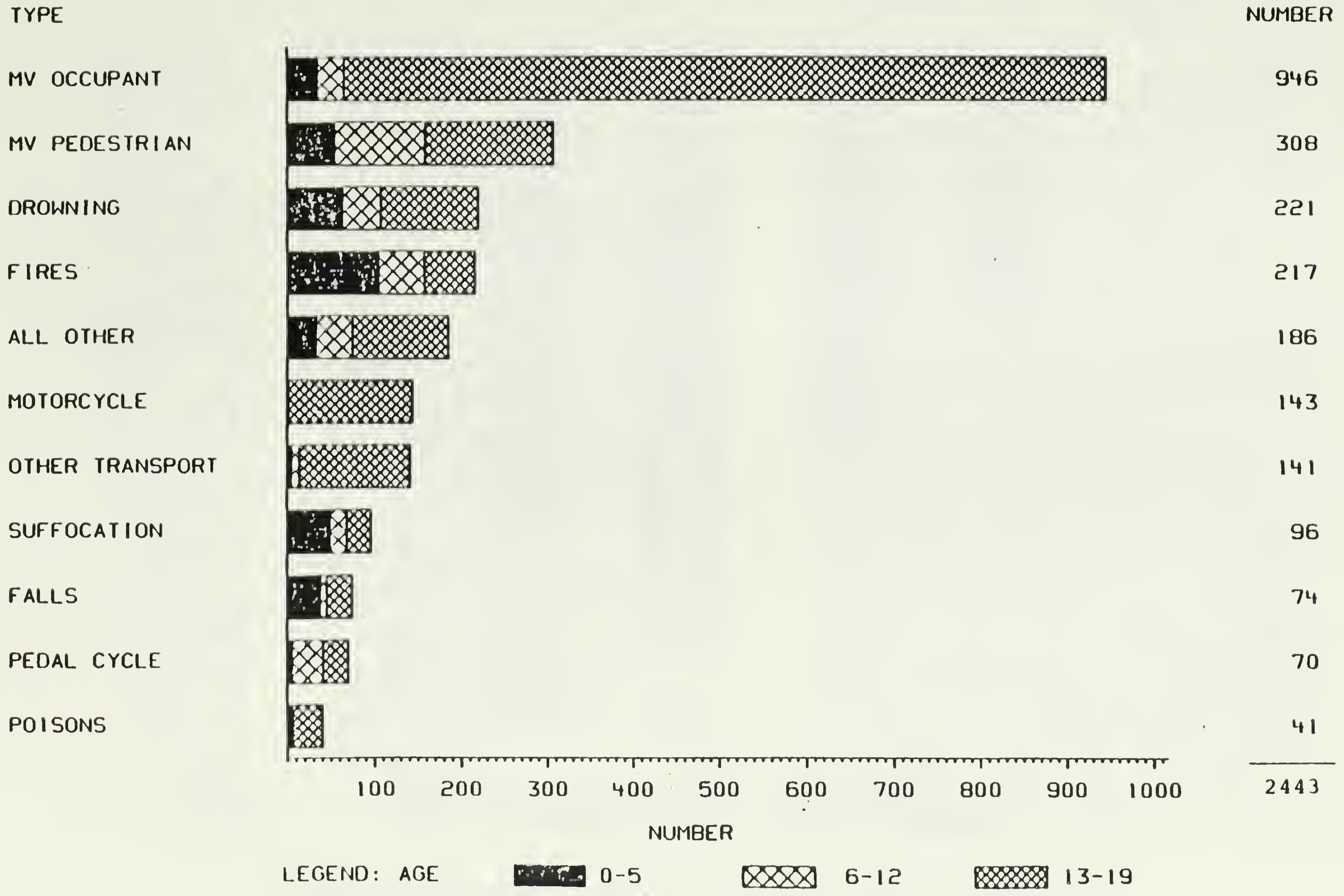
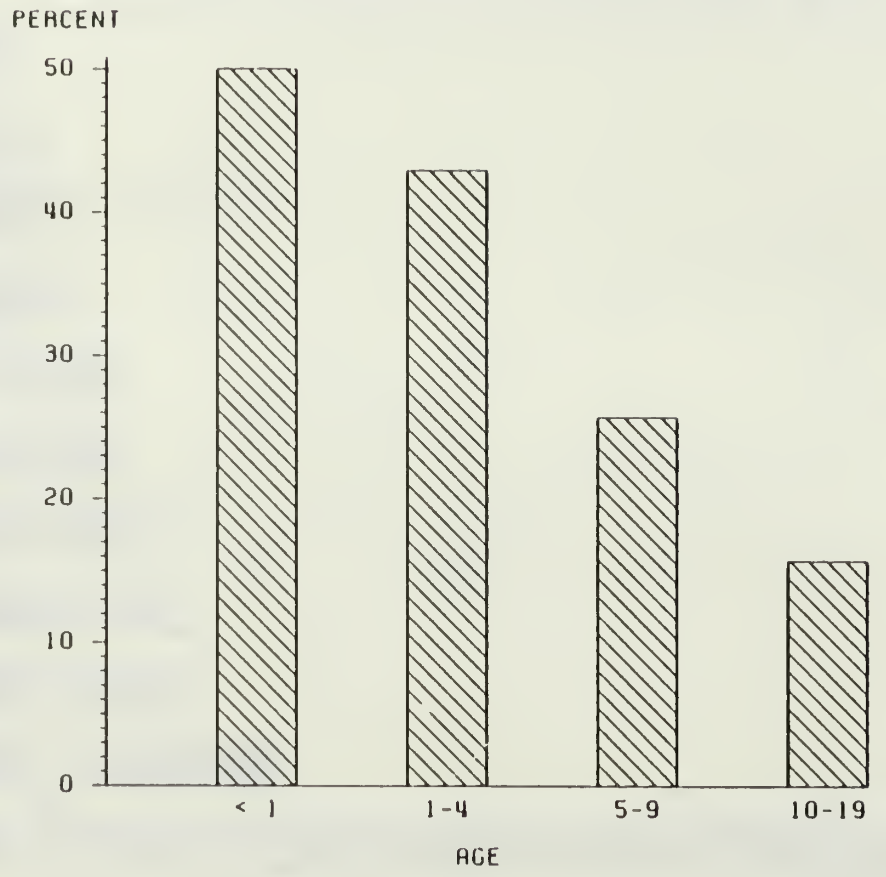


Figure 18

1984 MASSACHUSETTS SEAT BELT SURVEY

PERCENT PROPERLY RESTRAINED



DATA SOURCE: DIVISION OF FAMILY HEALTH SERVICES, DPH

The Massachusetts Child Passenger Safety Law went into effect in January, 1982. Legislation mandating seat belt use is pending in the state legislature.

This disparity is particularly marked for deaths due to motor vehicle accidents, suicides, and homicides. Non-white males in their 20's and 30's have a higher rate of homicides than any other age, sex or gender group.

The total annual number of childhood deaths is relatively small. In 1980, there were deaths to children under age 19. Infant deaths accounted for 748 of these. Figure 19 presents leading causes of death by age group for combined data from 1975 to 1980. No trends in mortality are apparent during this period and the year to year variation is high. The same 4 to 6 causes are always among the leading causes of death but their ranking varies from year to year. The significance of accidental deaths is immediately obvious. Various forms of cancer are also a significant fraction of childhood deaths even through their absolute numbers are small. While mortality rates for young children have declined in the past decade, those for adolescents and young adults have shown an increase. The mortality rate for children ages one through 14 has declined from 37.3 in 1970 to 27 in 1980, a 27.6% change decrease. For those aged 15 through 24, the rate has risen from 84.1 in 1970 to 85.3 in 1980, a 1.4% change increase. Motor vehicle accidents account for roughly half of the deaths in this age group. The Division is currently conducting a study of 1985 child and adolescent mortality which will provide additional detailed information on trends, patterns and characteristics of these deaths.

Lead Poisoning

Lead poisoning is caused primarily by the ingestion of lead paint. There are approximately 371,000 children in the high-risk group of six months through 5 years of age. In January, 1985, Centers for Disease Control recommended lowering the acceptable blood lead level from 30 to 25mcg/dl and the erythrocyte protoporphyrin (EP) level from 50 to 35 mcg/dl. Under the new guidelines the number of children considered to be at risk for lead poisoning is estimated between 8,000 and 12,000. (Figure 20)

The areas of highest risk are older urban communities where much of the housing predates 1950. Table 19 shows the amount of housing predating 1950 in the 25 cities with the largest childhood populations. In the state as a whole, 1.2 million housing units are likely to contain lead paint. In most of the cities shown, more than two-thirds of all housing units are old. Table 19 also indicates the number of pre-1950 renter-occupied housing units, which are less likely than owner-occupied units to be well maintained.

Minorities and the poor are at higher risk of exposure to lead hazards than the general population. The poor are generally unable to afford modern housing and are more apt to rent older units which may be less well maintained than modern housing units. Black children are at higher risk for lead poisoning, independent of family income level and level of urbanization.

Figure 19

LEADING CAUSES OF DEATH BY AGE GROUP

1975 TO 1980 COMBINED

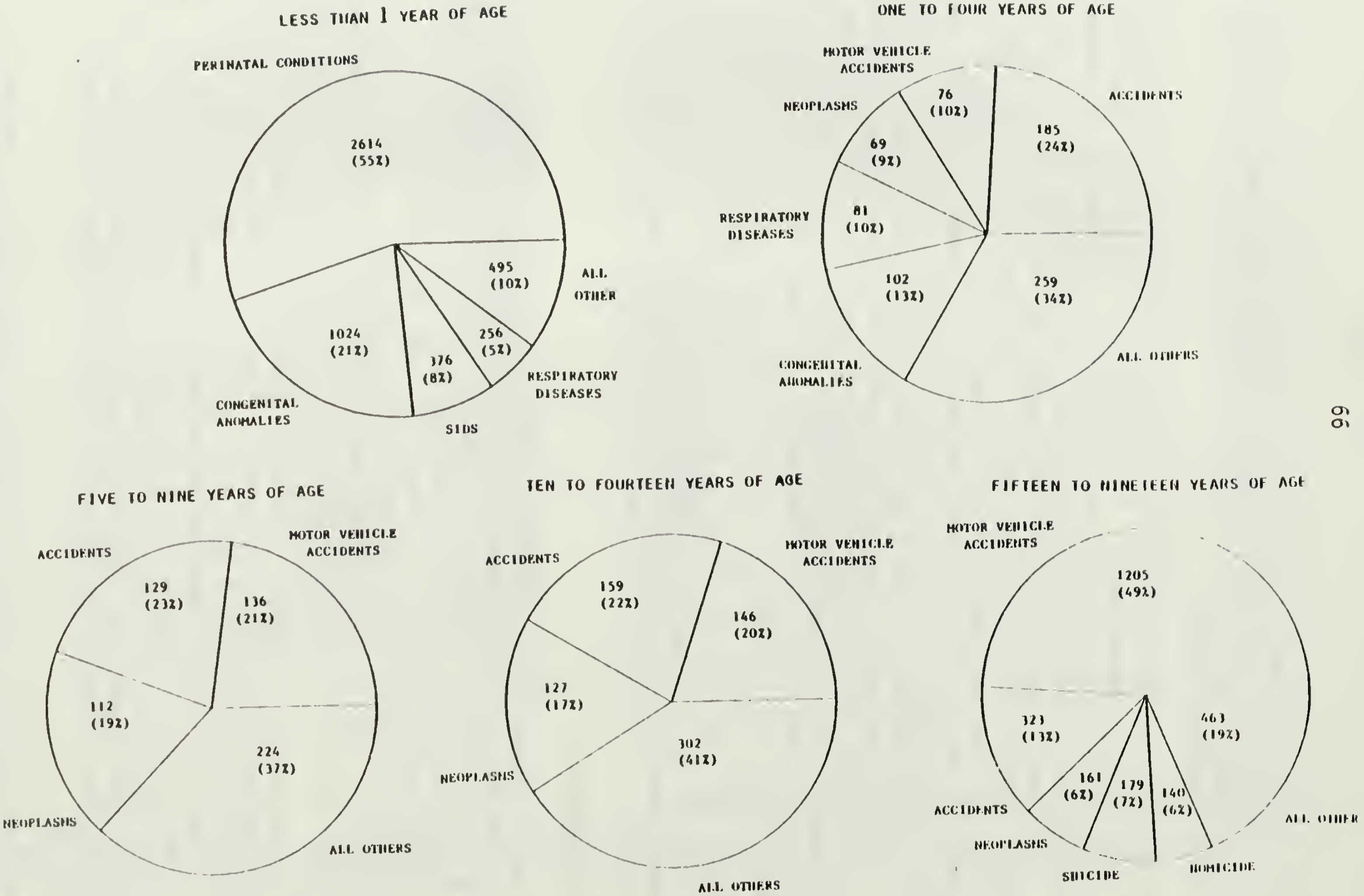
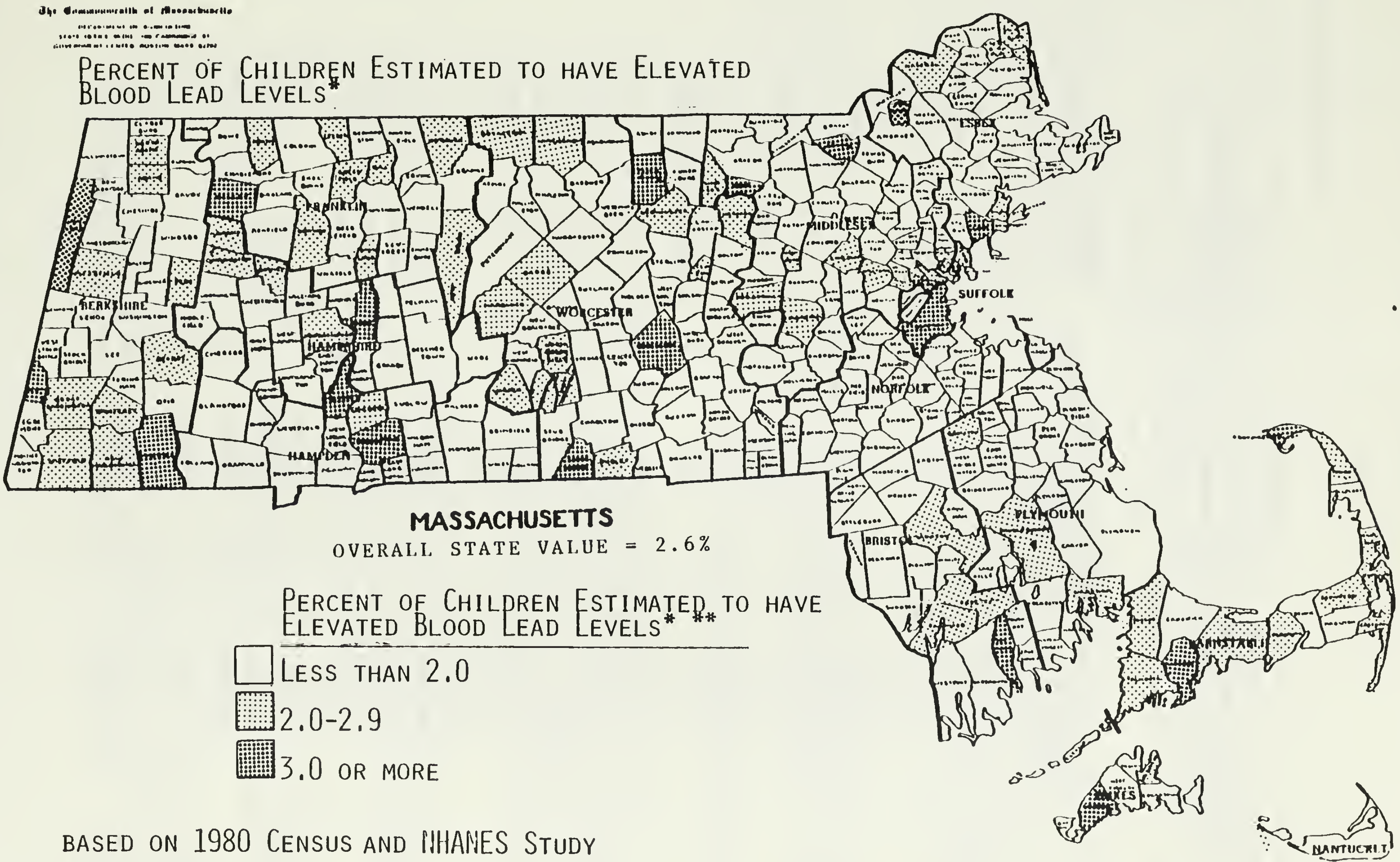


Figure 20



PERCENT OF CHILDREN ESTIMATED TO HAVE ELEVATED BLOOD LEAD LEVELS*

BASED ON 1980 CENSUS AND NHANES STUDY

*($\geq$ 30 MCG/DL)

** CDC HAS RECENTLY ISSUED NEW GUIDELINES OF $\geq$25 MCG/DL FOR BLOOD LEAD LEVELS AND $\geq$35MCG/DL FOR EP LEVELS

Table 19

PRE-1950 HOUSING UNITS FOR THE 25 MASSACHUSETTS CITIES WITH THE LARGEST CHILD POPULATIONS IN MASSACHUSETTS

(Based on 1980 Census Data)

City	All Pre-1950 Housing Units		Number of Pre-1950 Renter Occupied Housing Units
	# Units	% of Housing Units	
Somerville	26,684	86.2	16,327
Medford	16,508	80.0	6,641
Fall River	28,648	77.4	18,066
Lynn	25,178	77.2	12,124
Cambridge	31,349	75.9	21,621
New Bedford	29,626	75.0	16,935
Fitchburg	11,471	74.8	5,601
Boston	179,267	74.3	112,878
Lawrence	19,278	74.2	11,833
Newton	20,907	71.9	5,897
Worcester	43,609	70.8	22,561
Malden	15,149	70.6	7,390
Lowell	24,411	70.0	12,145
Haverhill	12,807	69.2	5,485
Holyoke	12,361	68.6	7,235
Pittsfield	13,989	68.5	5,885
Quincy	22,960	67.0	8,933
Taunton	10,961	65.5	4,707
Springfield	36,337	61.9	17,228
Waltham	12,054	56.8	6,586
Brockton	18,479	53.3	9,243
Chicopee	10,647	50.5	5,169
Weymouth	9,333	47.0	1,876
Plymouth	4,766	36.2	1,927
Framingham	6,923	28.1	3,268
MASSACHUSETTS	1,211,497	56.6	540,908

Nutritional Status

While the Massachusetts MCH program has attempted to address needs related to nutritional health through a number of programs, until recently, there was little data to indicate the extent of need for services to improve nutritional status. However, the results of the 1983 Massachusetts Nutrition Survey (MNS) provided sound evidence that chronic malnutrition is a significant health problem among poor, young Massachusetts children.

The MNS collected information on 1,429 children aged six months to six years who receive care at community health facilities serving 20 cities and towns with high proportions of poor individuals (Figure 21), thus focusing on a population that is particularly vulnerable to nutritional insults. Height and weight measurements were made, recent laboratory blood test data obtained and interviews with families were conducted, in order to describe the socioeconomic characteristics of children studied.

The survey methodology was developed by the Division in consultation with a group of nutrition experts and pediatricians, including those whose initial case reports of malnutrition prompted the legislature to provide funds for the survey. The major findings related to nutritional status included:

- Malnutrition is a significant health problem among poor, young children.

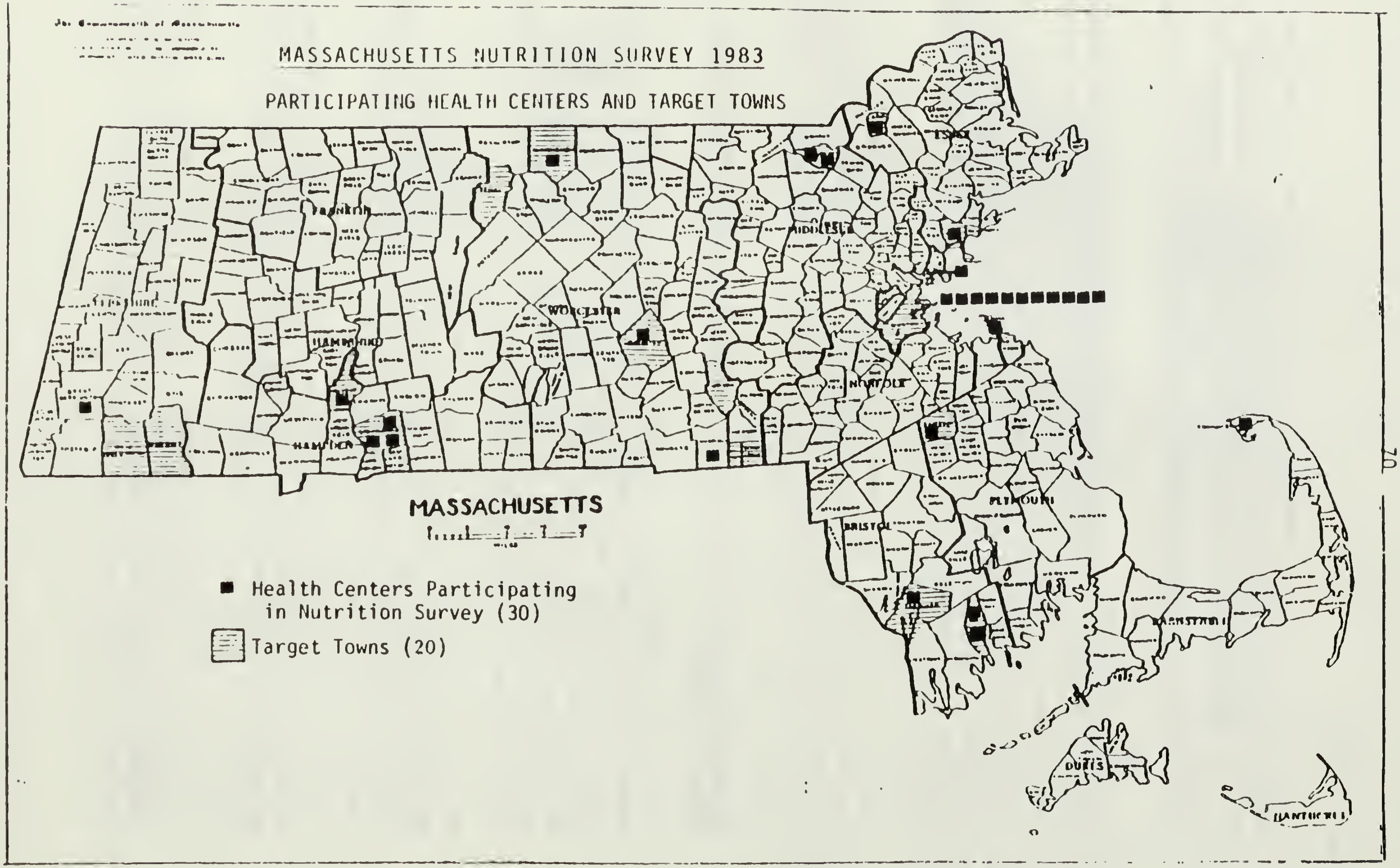
  9.8% of the sampled children were stunted, or had height-for-age levels below the 5th percentile of national norms, twice what would be expected. This finding means that an estimated 10,000 to 17,500 poor, young children across the state may be suffering from inadequate food intake over a prolonged period of time, with consequences for learning abilities and health status.

- 3% of the sampled children were wasted, or had weight-for-height levels below the 5th percentile of national norms. While the extent of wasting was less than would be expected, these children will require follow-up and may require medical attention as well.

- 12.2% of the children who had had recent blood tests were anemic. Prolonged iron deficiency may result in learning problems, impairment of body defenses against infectious diseases, and greater risk of lead poisoning.

- 18.1% of the children had one or more of the above three indicators of undernutrition. Additionally, 8.1% of the children sampled were obese, a significantly higher percentage than would be expected. (Figure 22.)

Figure 21

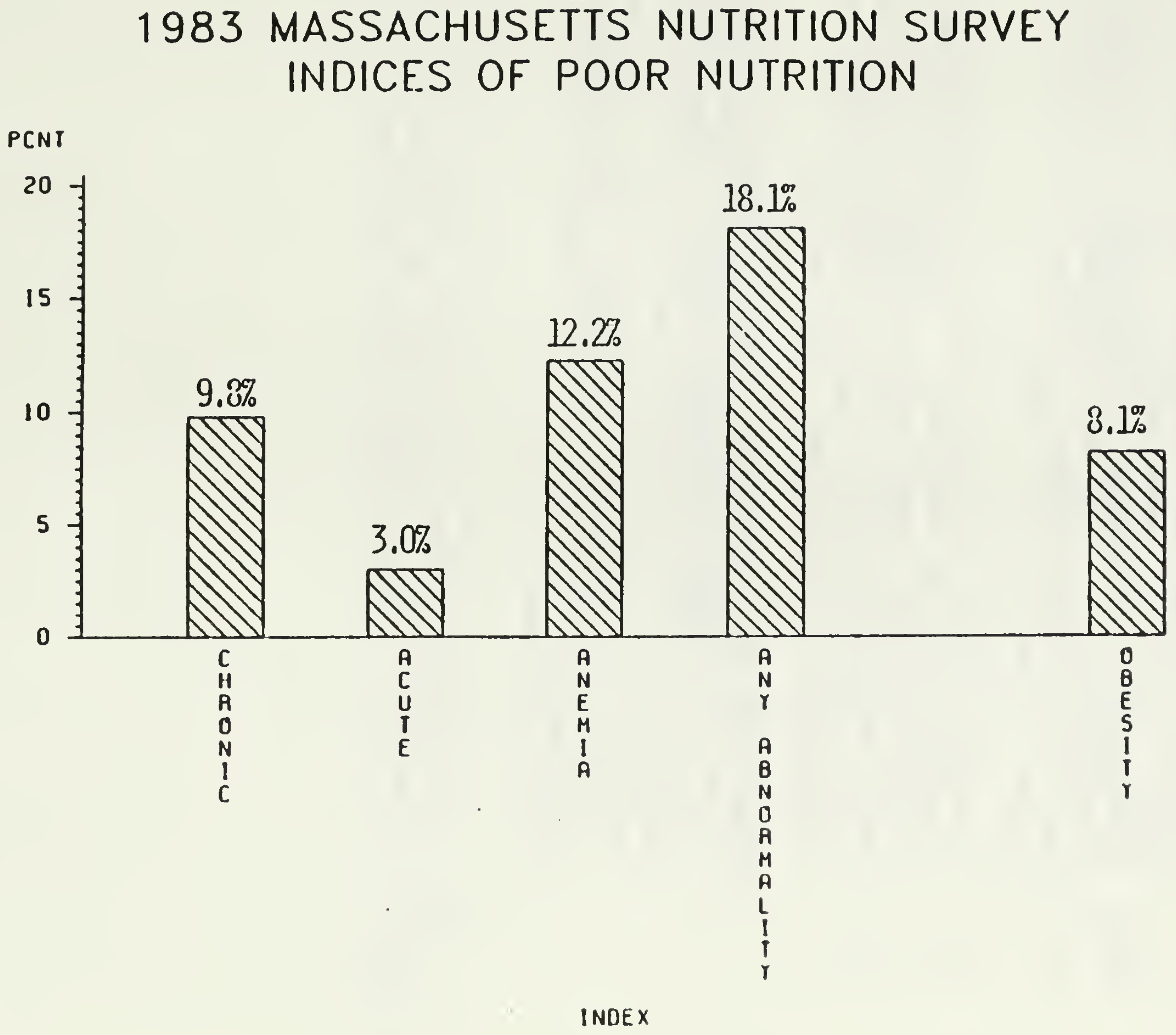


MASSACHUSETTS NUTRITION SURVEY 1983

PARTICIPATING HEALTH CENTERS AND TARGET TOWNS

MDPH/DFHS 6/83

Figure 22


1983 MASSACHUSETTS NUTRITION SURVEY
INDICES OF POOR NUTRITION

- The poorest group of children had the highest levels of stunting.

  Even though the entire survey sample consisted of low income children, differences in the magnitude of stunting were found according to income level. 10.5% of the sampled children whose families lived below the federal poverty line ($8,220 for a family of three) were stunted, more than double the percent for those sampled children whose families' income was somewhere above 200% of the poverty line. This difference existed across all racial/ethnic groups, but was most pronounced for white children. The level of stunting for white children below the poverty line was significantly higher than that for white children in higher income groups. (Table 20.)

  Southeast Asian children appeared to be at particularly high risk for malnutrition. 15.7% of Southeast Asian children in the sample were stunted; 11.8% were wasted. Both these levels were significantly higher than for the other racial groups. Some of these children were recent immigrants, but many were born in the U.S.

  Those children enrolled in the Medicaid program evidenced a higher level of stunting than the children whose medical care was covered by another source. 12% of the children on Medicaid had this indicator of chronic undernutrition (Figure 23). This finding alerts the state Medicaid program, particularly its Project Good Health component, to pay special attention to the preventive health needs of these children.

The findings of the MNS which related to food and income services are included under the "Service Indicators" section of this report, on page 97. The Division will be designing an ongoing system for nutrition surveillance during FFY 1986.

Table 20

1983 MASSACHUSETTS NUTRITION SURVEY

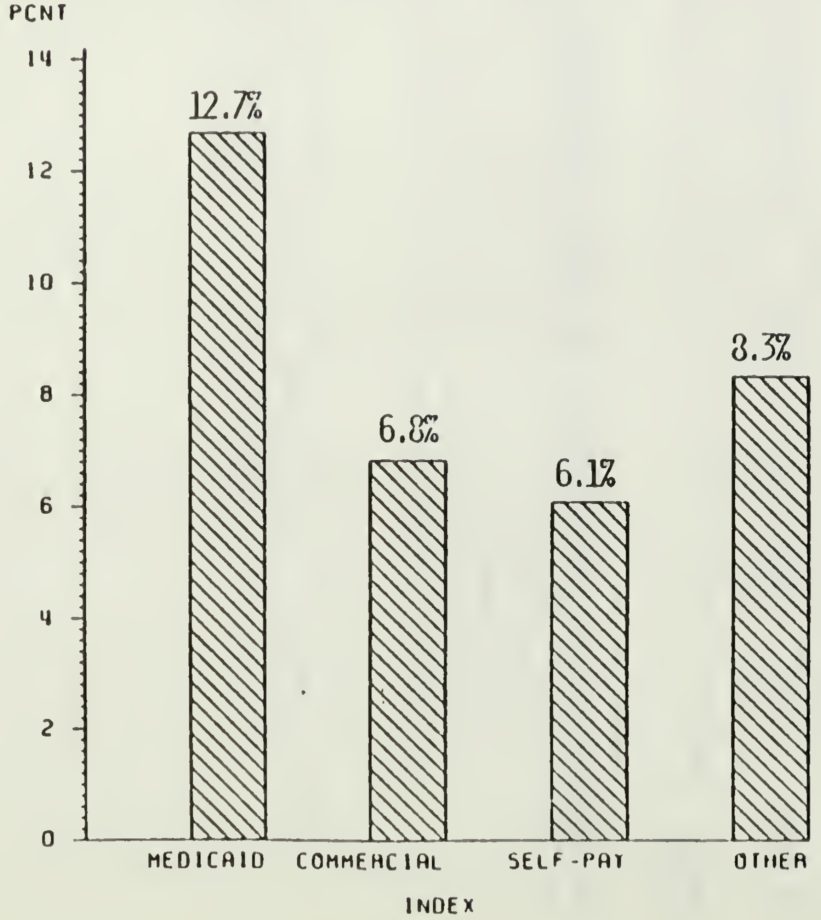
Percentage Low Height-for-Age by Poverty and Race

POVERTY LEVEL	BLACK	HISPANIC	WHITE	OTHER*	TOTAL
less than 100%	7.0	7.2	16.2	14.6	10.5
100-200%	5.2	5.4	10.3	12.5	8.8
greater than 200%	5.9	-	5.4	-	5.0

* The Other category is comprised primarily of Asians. It also includes American Indians and people who were reported as Other.

Figure 23

1983 MASSACHUSETTS NUTRITION SURVEY
LOW HEIGHT FOR AGE BY PAYER SOURCE



3. SERVICE INDICATORS

Prenatal Care

Early, continuous and comprehensive prenatal care is associated with positive birth outcome. To be effective, prenatal care must begin within the first three months of pregnancy (first trimester), assess a woman's risk for delivering prematurely or developing other problems during pregnancy, promote an adequate diet and breastfeeding, reduce or eliminate substance use, assist the woman in assuring adequate income and reducing stress in her environment, and provide family planning services.

In Massachusetts, babies born to women who had no prenatal care have a neonatal mortality rate ten times greater and a low birthweight rate five times greater than for women who receive adequate care (Figure 24).

The birth certificate provides the only statewide information on utilization of prenatal care. An index is derived from the trimester in which prenatal care began and the number of prenatal visits, adjusted for gestational age. While this index does not indicate whether a woman has received the kind and amount of prenatal care she needs, it measures the number of visits she receives against a minimal standard (nine visits over the course of a full-term pregnancy).

After steadily increasing to a high of 82.9% in 1981, the percentage of women receiving adequate prenatal care in Massachusetts began to decline in 1982, with 81.8% receiving adequate prenatal care. This percentage declined to 79.8% in 1983 (Table 21). The percentage of women receiving inadequate or no prenatal care increased from 2.7% in 1981 to 3.2% in 1983.

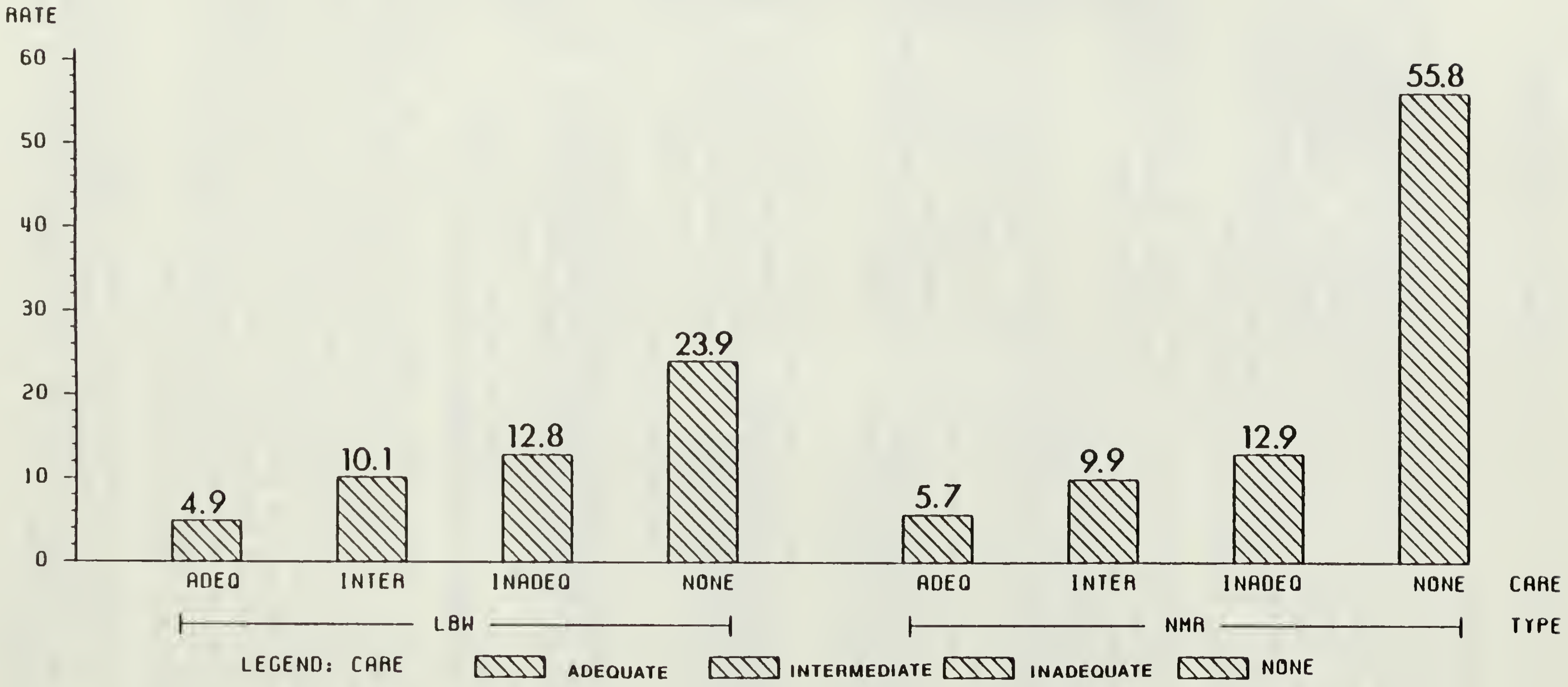
Another measure of the adequacy of prenatal care is the trimester in which prenatal care began. In 1983, of those women with known trimester of registration, 85.6% registered in the first trimester, 12% in the second trimester, 2% in the third, and .4% did not register for prenatal care. The percent registering in the first trimester declined from 88% in 1982.

Registration for prenatal care varies by community (Figure 25, Table 22). Holyoke, Springfield and New Bedford have a low percentage of women receiving adequate prenatal care (45.1, 64.8, 65.1 respectively) and a low proportion of births among women who registered early for prenatal care (52.6, 67.9, 73.8 respectively) compared with the average. Fifteen of the 25 largest cities in the state exceeded the state rate (3.2%) for percentage of women receiving no or inadequate prenatal care, including some which generally compare favorably with other areas of the state on measures of infant health status.

Pregnant teenagers are less likely to obtain early prenatal care as compared to older women. While 90.2% of births to women over age 19 had prenatal care in the first trimester in 1982, this percentage drops to 70.3% for women age 18-19 and to 61.1% for teens under age 18.

Figure 24

NEONATAL MORTALITY AND LOW BIRTHWEIGHT RATES
BY PRENATAL CARE UTILIZATION
MASSACHUSETTS 1978–82



NMR=NUMBER OF DEATHS <28 DAYS/1000 LIVE BIRTHS
LBW=NUMBER OF BIRTHS UNDER 2500 GRAMS/100 LIVE BIRTHS

DATA SOURCE: DIVISION OF HEALTH STATISTICS,DPH
PREPARED BY: DIVISION OF FAMILY HEALTH SERVICES, DPH

Table 21

PRENATAL CARE UTILIZATION DEFINED IN TERMS OF TRIMESTER OF REGISTRATION AND QUANTITY OF PRENATAL VISITS, ADJUSTED FOR LENGTH OF GESTATION MASSACHUSETTS RESIDENTS 1983

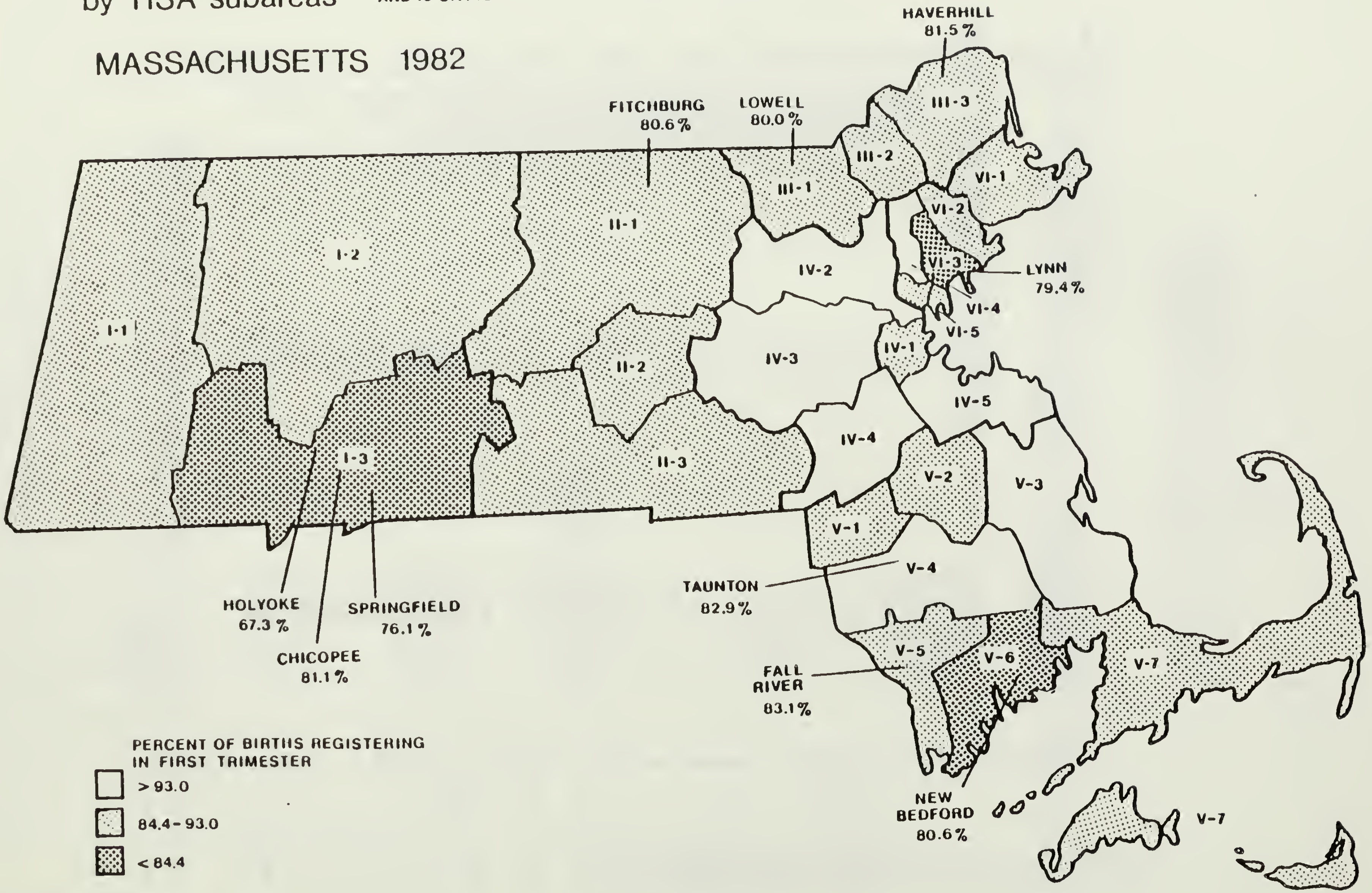
	PRENATAL CARE		
	ADEQUATE %	INTERMEDIATE %	INADEQUATE OR NONE %
Holyoke	45.1	41.9	13.0
Springfield	64.8	27.6	7.7
New Bedford	65.1	30.7	4.2
Fall River	66.5	29.5	4.1
Chicopee	68.3	26.6	5.1
Lynn	68.8	24.8	6.4
Fitchburg	69.6	27.1	3.4
Lowell	69.7	24.4	6.0
Brockton	71.2	23.0	5.8
Taunton	73.8	21.0	5.2
Lawrence	75.9	20.3	3.7
Plymouth	79.0	16.7	4.3
Boston	79.3	17.7	3.1
Worcester	79.4	17.8	2.9
MASSACHUSETTS	79.8	17.0	3.2
Cambridge	80.0	16.2	3.8
Pittsfield	82.2	14.4	3.4
Somerville	82.2	15.2	2.6
Haverhill	82.8	15.3	1.8
Malden	84.7	13.0	2.3
Medford	87.2	10.6	2.2
Waltham	88.4	9.7	1.9
Quincy	89.2	9.4	1.4
Framingham	89.3	7.0	3.7
Newton	90.3	8.9	0.8
Weymouth	92.2	6.3	1.5

Prepared by: Division of Family Health Services, MDPH 1/8/85
Data Source: Division of Health Statistics and Research, MDPH

FIGURE 25

Percent of births with prenatal care in the first trimester by HSA subareas-- AND 10 CITIES WITH LOWEST % EARLY REGISTRANTS

MASSACHUSETTS 1982



Prepared by; Division of Family Health Services, MDPH
Data Source; Division of Health Statistics and Research, MDPH

Table 22

PROPORTION OF BIRTHS BY TRIMESTER OF PRENATAL CARE REGISTRATION
MASSACHUSETTS RESIDENTS 1983

	TRIMESTER OF REGISTRATION			
	FIRST	SECOND	THIRD	NONE
Holyoke	52.6	36.0	8.8	2.6
Springfield	67.9	25.6	5.6	1.0
New Bedford	73.8	23.6	1.9	0.7
Chicopee	74.8	21.1	3.7	0.4
Fitchburg	77.3	20.0	2.5	0.2
Lynn	77.5	18.7	3.0	0.8
Lowell	78.3	17.1	3.1	1.5
Taunton	79.2	16.8	3.3	0.7
Brockton	82.0	13.9	3.8	0.3
Fall River	82.7	14.2	2.6	0.5
Lawrence	83.4	13.9	2.1	0.6
Boston	84.1	13.9	1.7	0.4
Plymouth	84.4	12.0	2.7	0.9
Cambridge	85.2	11.6	2.7	0.5
Haverhill	85.4	13.4	1.0	0.3
Pittsfield	85.5	11.4	2.8	0.3
MASSACHUSETTS	85.6	12.0	2.0	0.4
Worcester	86.0	12.2	1.6	0.2
Somerville	87.5	10.5	1.8	0.2
Malden	89.5	8.6	1.7	0.3
Medford	91.4	7.0	0.9	0.7
Waltham	91.8	6.6	0.9	0.6
Quincy	92.3	6.8	0.8	0.1
Framingham	92.6	5.1	2.3	0.0
Weymouth	94.6	4.2	0.9	0.3
Newton	95.3	4.1	0.6	0.0

Prepared by: Division of Family Health Services, MDPH 1/18/85
Data Source: Division of Health Statistics and Research, MDPH

Minority women are less likely than white women to register early and more likely to register late or not at all. While 89.1% of white women delivering in 1982 had early prenatal care, only 78.4% of black women did. In 1983, 80.2% of white women delivering received adequate care, compared to only 62.2% of Hispanic women and 66.4% of black women.

Women of low socioeconomic status may not have the resources to seek prenatal care. Educational attainment is sometimes used as a measure of socioeconomic status. Only 72.4% of births to women with an education below twelfth grade had early prenatal care, whereas 90.8% of births to women who graduate high school had prenatal care in the first trimester of their pregnancy. More importantly, 5.2% of women with less than twelfth-grade education had no or late care versus 1.2% of women with at least a twelfth grade education.

Access to prenatal care is often determined by the adequacy of the system which provides services. In Massachusetts, 40 Community Health Centers and 32 hospitals offer prenatal care, primarily to low-income women (Figure 26). These resources, 20 of them subsidized by Maternal and Infant Care projects, clearly are not available in all areas of the state.

In addition, obstetricians in private practice serve the majority (estimated at 85%) of pregnant women in the state. Medicaid insures roughly 100,000 women of childbearing age in Massachusetts. Recently, many obstetricians have chosen not to enroll as Medicaid providers, citing low fees and burdensome bureaucratic requirements. As of June, 1985 there were 384 obstetricians enrolled in the Medicaid program, which is 49% of the total licensed to practice obstetrics.

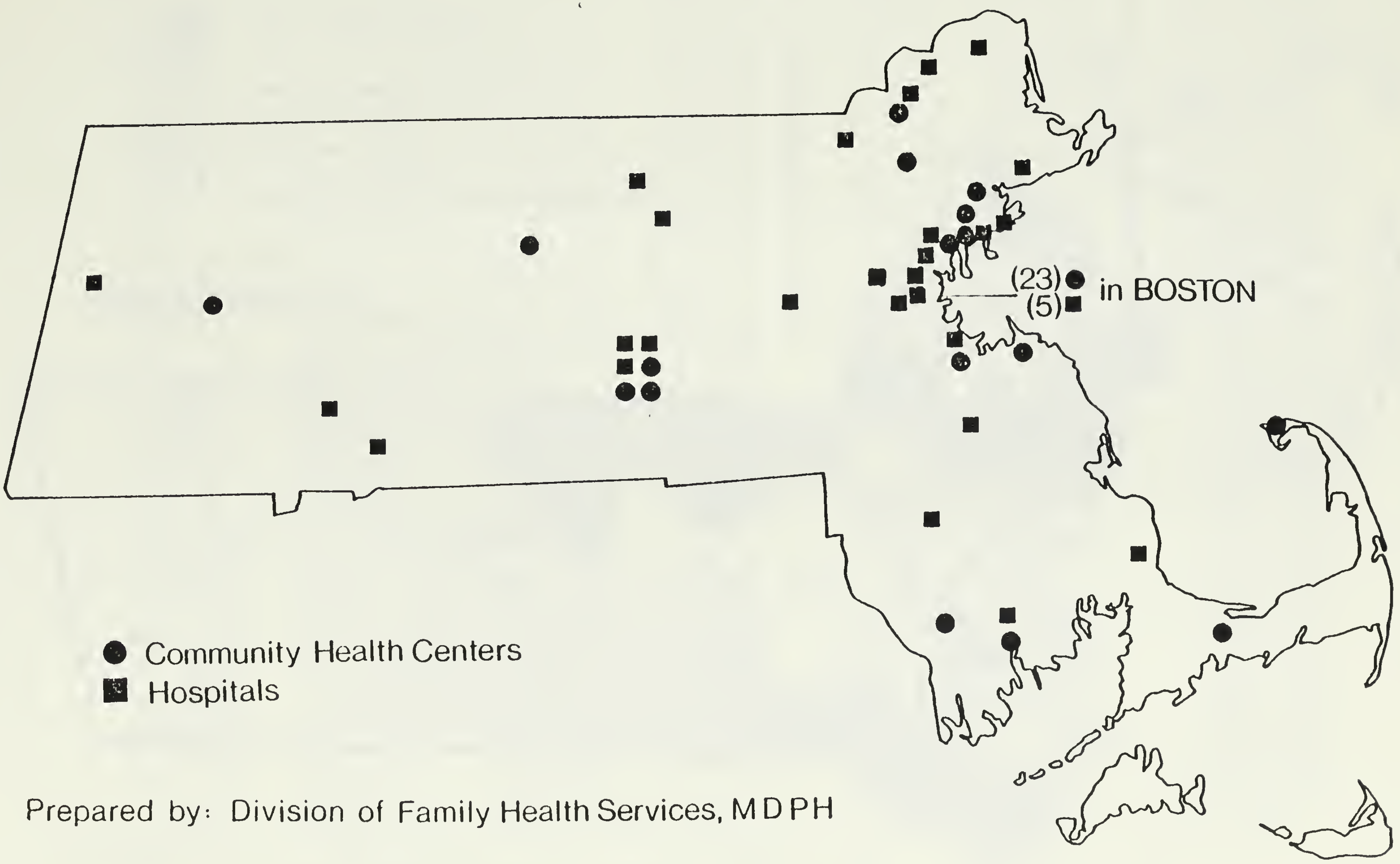
Pediatric Care

Access to quality comprehensive health care is difficult to measure. However, the presence of pediatricians in a community can be used to roughly assess the availability of child health care.

In 1980, 744 Massachusetts physicians indicated their primary specialty to be pediatrics. The ratio of children under age 14 per pediatrician was 1455:1; for children under age 19 it was 2314:1. Figure 27 shows the relative distribution of children under age 14 per pediatrician by HSA subarea. While child to pediatrician ratios are not an adequate measure of availability of care, as other primary care physicians may also serve children, the higher ratios in the Merrimack Valley (HSA 3) and Southeast Massachusetts (HSA 5) should be noted. The relatively low ratios in Boston may be deceptive as they mask differences in smaller geographic areas, and because many Boston pediatricians practice in teaching hospitals, often providing specialty care to children from outside the Boston area. Evidence indicates that these pediatricians are accessible to low-income children in Massachusetts.

Figure 26

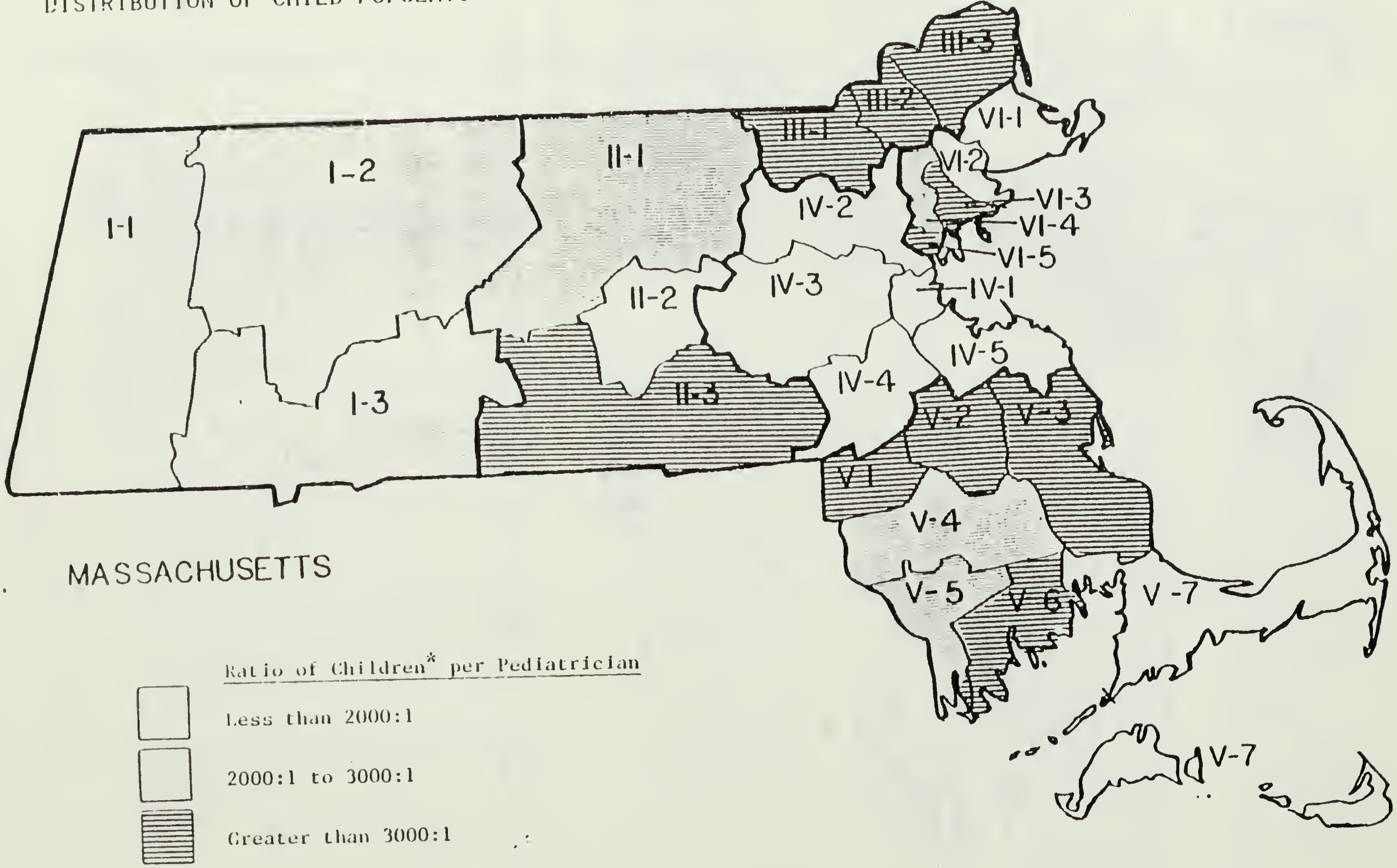
COMMUNITY HEALTH CENTERS AND HOSPITALS OFFERING PRENATAL CARE



Prepared by: Division of Family Health Services, MDPH

Figure 27

DISTRIBUTION OF CHILD POPULATION* TO PEDIATRICIAN RATIO BY HSA SUBAREA, 1980



*Children Under Age 14

The American Academy of Pediatricians conducted a survey of Medicaid participation in Massachusetts. The physicians surveyed were office-based, non-federal pediatricians, practicing full-time. The percent of pediatricians participating in Medicaid was reported as 95% for 1983. High reimbursement rates and prompt payment for pediatricians' services were reported to have contributed to their high level of participation.

Lead Poisoning Prevention Program

In 1983, 126,938 children were screened for lead poisoning. This represents an 8% increase since 1981 in the number of children screened. Overall, 1,728 (1.4%) children had elevated lead and erythrocyte protoporphycin levels. An estimated 140,000 children will have been screened in 1984, a 10% increase from 1983.

There is a great deal of variability statewide both in the number of children screened and in the number with elevated blood lead levels. Table 23 shows the statewide distribution of children screened by HSA. In HSA I, 19.1% of all children are screened while 62% of those in HSA IV have been tested.

Services to Handicapped Children

Handicapped children are found throughout the Commonwealth. No reliable data are available on the total number of handicapped children in the state but it is estimated that about 2% (1,500) of all births each year have a handicapping condition. Ten percent of these (150) are multiply-handicapped.

One of the goals of the SHC Clinic Program has been to provide services to such children in areas where services are not readily available. Historically, SHC clinics have been located outside of Metropolitan Boston, because of the concentration of medical centers and other resources for handicapped children in this area, and the lack of resources in the rest of the state. This distribution is being reassessed over a three-year period as part of "Project Serve", the federally-funded assessment of service needs of handicapped and chronically-ill children in the Commonwealth. Table 24 shows the distribution of SHC clinic patients by Department of Public Health Region. There were 4,329 active patients under age 18 during April 1985. During FFY'84, the program served 5,824 patients under age 18, and 248 over 18, whose active treatment had not been completed. Figure 28 shows the statewide distribution of children attending SHC cinics in 1982.

Table 25 shows the distribution of all active SHC patients by clinic type. Orthopedic problems account for nearly half the total (2,086) active patients. Other common handicapping conditions are cardiac (634), neurological (592), and oro-facial (445) defects. Together these four sets of conditions account for 85% of all active patients.

Table 23

MASSACHUSETTS LEAD PAINT POISONING SCREENING ACTIVITY - 1983

	Children Screened				
HSA	Number	Percent Pop. (6 mo.-6 yr)	Percent Positive	Number Positive	Estimated Number*
I	10,100	19.1	2.8	286	715
II	14,516	29.4	2.8	41	103
III	12,837	34.7	4.4	569	1,423
IV	53,119	61.8	0.9	483	1,208
V	23,176	30.7	6.0	140	350
VI	13,190	35.0	1.5	209	523
MASSACHUSETTS	126,938	34.2	1.4	1,728	4,322

* Should the screening penetration rate remain stable at 34.2%, using the new CDC recommended lead level of 25mcg/dl and recommended EP level of 35 mcg/dl, we estimate that caseload will rise 2-3 fold.

Table 24

DISTRIBUTION OF SERVICES FOR HANDICAPPED CHILDREN CLINIC PATIENTS BY DPH REGION

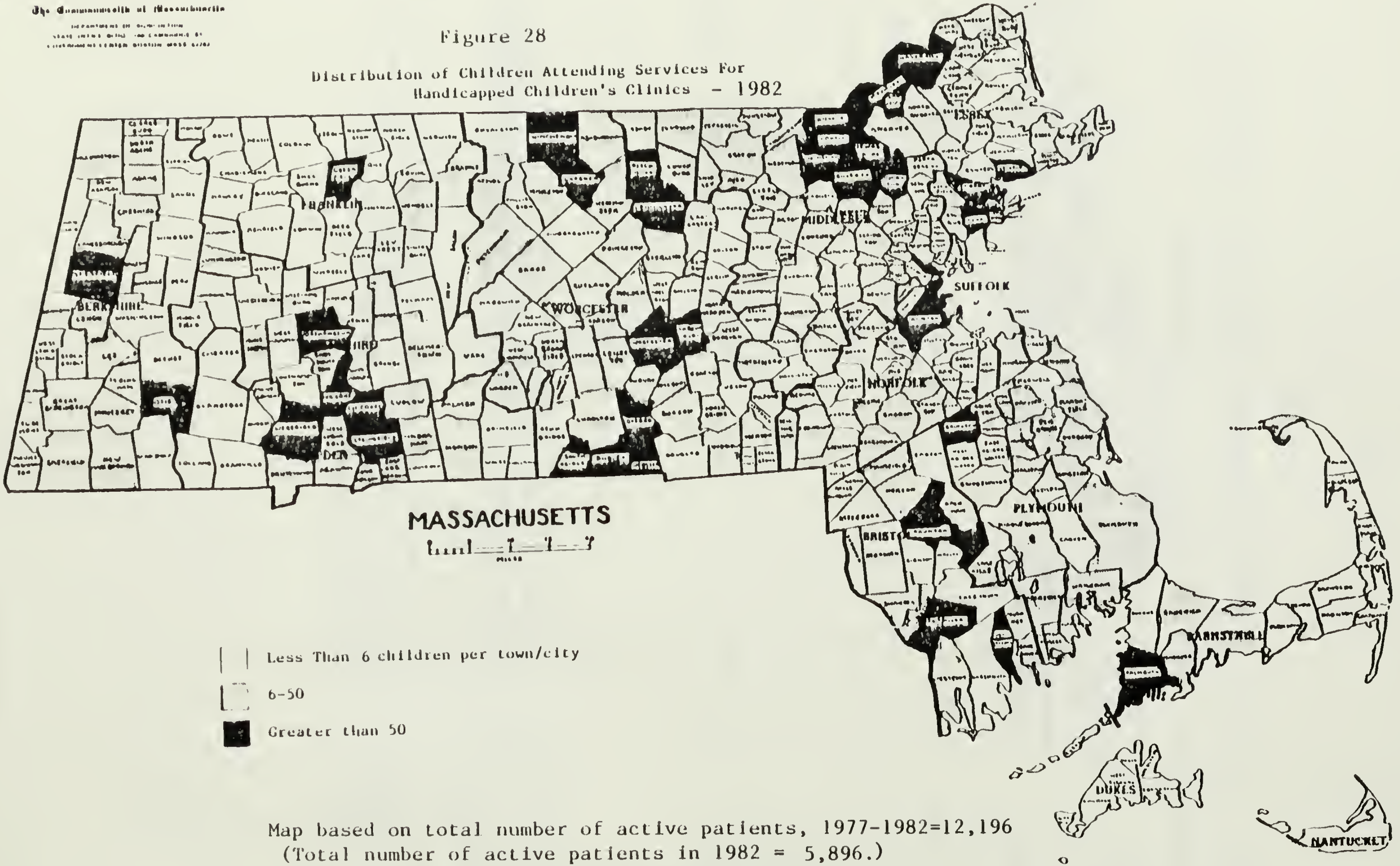
Clinic Region	April 1985 Number Of Active Patients	State Fiscal Year 1984* Total Number Of Active patients	State Fiscal Year 1983 Total Number Of Active Patients
Western (≤ 18)	583	905	893
Central (≤ 18)	909	1,352	1,312
Northeast (≤ 18)	1,235	1,729	1,630
Southeast (≤ 18)	1,435	1,795	1,187
Boston Office (≤ 18)	167	169	780
Massachusetts - Subtotal (≤ 18)	4,329	5,824	5,802
> 18	74	248**	873
Total	4,403	6,198	6,675

* Note: Due to admissions and discharges, the number of children served over the course of a year is much greater than the number of children active at any point in time.

** Note: The over-age-18 clients consist of 205 Epilepsy Control Program patients (for whom there is no age cut-off for service) and 43 patients in other clinics who were admitted prior to age 18 but have not yet completed treatment.

Figure 28

Distribution of Children Attending Services For
Handicapped Children's Clinics - 1982



Map based on total number of active patients, 1977-1982=12,196
(Total number of active patients in 1982 = 5,896.)
(Total number of active patients in 1984 = 6,198.)

Table 25

DISTRIBUTION OF SHC PATIENTS BY CLINIC TYPE STATEWIDE APRIL 1985 AND FY'84

SHC CLINIC	APRIL 1985	FISCAL YEAR 1984
Orthopedic	2,086	2,668
Cardiac	634	820
Neurology	592	714
Oro-facial	445	518
Scoliosis	355	408
Cerebral Palsy	91	110
Myelodysplasia	89	101
Developmental	63	84
Inborn Errors	*	*
Genetics	32	*
Plastic	7	8
Pediatric	*	*
Brace	9	6
Other	---	1,131
TOTALS	4,403	6,568

* Note: Clinic types are included within the category marked "Other."

Severely handicapped children are involved with multiple providers. The Case Management Services Unit provides technical assistance and case management services to aid families in coordinating the educational, social, medical, rehabilitative and developmental services their child receives. Any handicapped child up to age 18 is eligible for the service, but the priority is to service severely handicapped children, including those receiving Supplemental Security Income and those served through other Divisional Services For Handicapped Children Programs. Table 26 illustrates the number of SSI recipients by DPH region, as well as the number of referrals, technical assistance and case-management caseloads for FY'84.

The Early Intervention Program

There are currently 43 Early Intervention (EI) Programs administered by the Division. These programs are intended to identify and assist children who are at established, biological, or environmental risk of developmental disability at as early an age as possible. In 1984, 2,500 children, about 1.2% of all children under age three, were served by these programs. A needs assessment conducted by the Division in the spring of 1984 revealed that 25,417 children, birth to three, are in need of early intervention services. In 1985, approximately 11.8% of the population in need were served.

Higher proportions of this population are served in western Massachusetts and in some of Boston's suburbs than in the southeastern and northeastern sections of the state. Plans are being implemented to correct inequities across the state as well as to meet more of the potential need for Early Intervention Services across the state.

Services To Improve Nutritional Status

The 1983 Massachusetts Nutrition Survey provided some information on the extent to which low income preschool children were receiving food and income benefits.

Information on family income provided estimates of the percentage of children who might be financially eligible for Aid to Families with Dependent Children (AFDC), Food Stamps and the Women, Infants and Children (WIC) Program. 18% of the sampled children who appeared to be financially eligible for AFDC were not receiving its benefits. 32% of the sampled children who appeared to be financially eligible for Food Stamps were not receiving them. While these percentages are not exact because these programs consider other factors such as assets, living costs and family situation in determining eligibility, they indicate that a substantial number of eligible children are not receiving benefits.

Table 26

CASE MANAGEMENT SERVICES (CMSU)*

Region	FFY'84 SSI Recipients < 18	FFY'84 Referrals To CMSU	FFY'84 Technical Assistance Cases**	Active Management Cases in Final Quarter, FFY'84
West	867	189	420	70
Central	779	187	153	105
Northeast	1,437	201	134	157
Southeast	1,540	146	347	242
Metro Boston	1,475	65	203	136
TOTALS	6,387***	788	1,257	710

* Cases are generated both through outreach to Supplemental Security Income (SSI) recipients, as well as referrals.

** Does not include 188 Statewide Technical Assistance cases handled by the Central Office Training Specialist.

*** Includes 289 missing cases.

Unlike AFDC and Food Stamps, WIC is not an entitlement program. Historically, the program has not had sufficient funding to serve all who are eligible. While additional funding in FY 1983 allowed Massachusetts to increase its caseload, at the time of the survey it reached only 19% of financially-eligible children aged one to five statewide. While the survey indicated that the WIC program had a high participation rate (45.8%) among this group of children who use health centers, compared to the statewide participation rate, it also confirmed that the program does not reach all who require it. 15% of the children who were both financially eligible and had documented nutritional deficits were not enrolled in WIC. Statewide, this population is estimated to be about 10,000 children.

4. RELATING NEEDS ASSESSMENT TO PROGRAM LOCATION

In maternal and child health programs where funding is limited and spending must be targeted where it will be most effective, assessing the areas of greatest need for each type of service is an important task.

No one factor is a good indicator of need, particularly at the town/city level, where small population and low birth rates may provide rates that are unstable from year to year. On the other hand, aggregating geographic areas can mask smaller areas with significantly high rates. A variety of factors usually need to be examined in doing a needs assessment. The factors and their relative weights should vary depending on the objective of the program for which the need assessment is being done. For example, an adolescent pregnancy program should put a large emphasis on the number and rate of births to teenage mothers.

Current and Past Efforts

Beginning in 1982, needs assessments have been carried out for several programs in the Division. Most of these programs distribute funds via a review process that linked the results of the statistical needs assessment with proposals submitted on an open, competitive basis. While available funds are insufficient to provide services for all individuals needing them, the introduction of more quantitative and systematic needs assessment methods permitted targeting of resources to areas and populations of greatest need.

Two statistical needs assessment methodologies have been developed. The first one, which utilized principal component analysis, was initially developed in 1982 for the WIC program and then modified slightly for the Primary Pediatric and Prenatal Care Program.

The second statistical needs assessment methodology was developed for the Lead Paint Poisoning Prevention Program. It utilized the findings of the National Health and Nutrition Examination Survey (NHANES) with respect to the prevalence of lead poisoning of children by various socioeconomic factors.

WIC Needs Assessment

The needs assessment methodology for WIC was originally developed in 1982 by a committee of experts including academicians, public-health planners, statisticians, pediatricians, and nutritionists from the community and the Department of Public Health. This methodology has remained basically the same in the last four years, although the needs assessment is updated periodically utilizing new information. A needs assessment score was developed utilizing both health and poverty data. Selection of data items was based on their degree of correlation with the need for service and uniform availability of the information for all Massachusetts cities and towns. Three health indicators were chosen:

- Neonatal Mortality Rate (5-year rate)
- Low Birth Weight Rate (5-year rate)
- Teenage Birth Rate (5-year rate)
  (i.e. # deliveries to women age 17/1000 births)

These health indicators were converted to a Health Index utilizing a statistical procedure called Principle Component Analysis. Two poverty indicators were chosen:

- Percent of children less than age 5 below poverty (census data)
- Unemployment rate

These were converted into a Poverty Index utilizing Principle Component Analysis. The Health Index and Poverty Index were then combined into a Needs Assessment Score. The Health Index was given greater weight because the health data were more current and provided a better picture of the risk of poor perinatal outcome. These scores were ranked to determine the relative need status of each city and town.

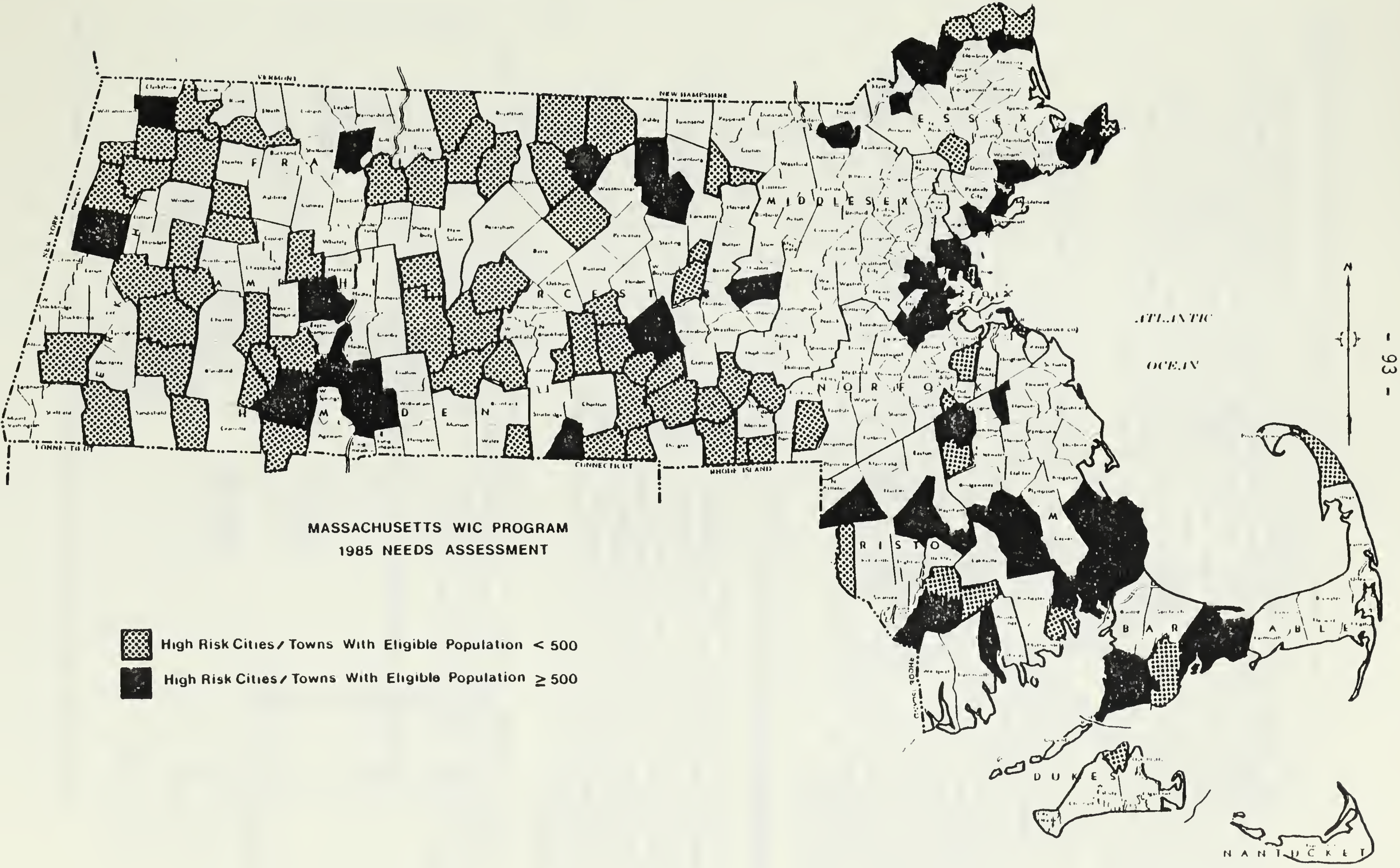
The number of individuals in need of WIC services was then estimated according to the characteristics of the population toward which the services of the program are targeted, specifically: percent of children under age 5, below 200% of poverty level and number of poor pregnancies for each city and town. This formula is the same one used by the USDA. Funds are allocated to geographic areas using a combination of the number of individuals in need of WIC services and the needs assessment score. Figure 29 illustrates the results of the FY 1985 needs assessment.

Primary Pediatric and Prenatal Care Needs Assessment

The Primary Care Program provides services to almost the same type of population as WIC, but in this case the services provided are primary prenatal and pediatric medical care. Because of the similarity of the target population to that of WIC, the Primary Care Program utilized the same needs assessment methodology as WIC, but varied the criteria used to determine the number of individuals in

Figure 29

WIC Program - Needs Assessment FY'85



need in order to match their program criteria. Criteria employed were percentage of families under 200% of poverty level; percentage of children under age six; and number of births in 1980 for each city and town. Available funds were then allocated to HSAs in a manner proportionate to the number of individuals in need. Proposals received were evaluated according to the quality of the proposed program and the contractor's ability to serve individuals in areas determined to be at highest need (Figure 30).

In the spring of 1985, the Division convened a committee of health planners, practitioners and statisticians to perform a current needs assessment for prenatal care services. Cities and towns were grouped into ambulatory care areas and, based on population size, were differentiated as Urban or Non-Urban Areas. The committee developed a needs assessment score based on principal component analysis which provided a relative ranking of need for prenatal services. This score was based on low birthweight, neonatal mortality, insufficient prenatal care and deliveries with Medicaid or no insurance. An indication of magnitude of need was then determined by estimating the number of women who delivered in 1983 who were in households with an income less than 200% of the poverty level.

Childhood Lead Poisoning Prevention Needs Assessment

As mentioned previously, the Lead Paint Poisoning Needs Assessment was based on the NHANES Survey which had been conducted between 1976 and 1980. This survey provides national estimates of elevated blood lead levels among children based on blood samples obtained from a representative sample of the U.S. population. Published information from NHANES provides estimates of the childhood population with elevated (≥30 ug/Pb/dl whole blood) lead levels controlling for factors such as race, family income and urbanization.

These Income groups were adjusted slightly to reflect the availability of data and a set of rates were added for Hispanics who were believed not to have the same rates as either whites or blacks. The rates utilized were:

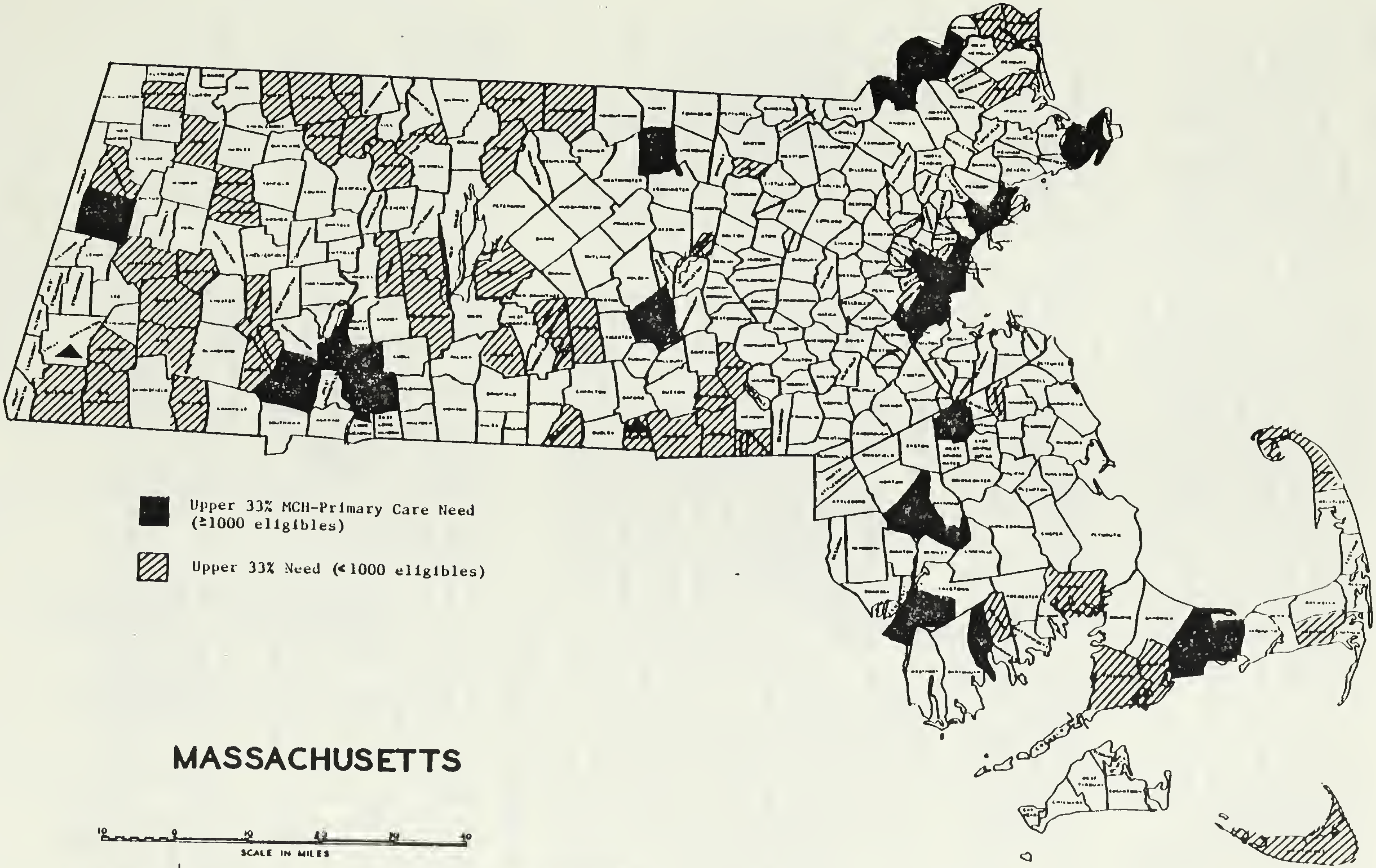
Estimated Prevalence of Elevated Blood Lead Levels

	Race		
	White	Black	Hispanic
Family Income (1979)	% of children 6 months - 5 years		
< $7,500	5.9	18.5	13.5
$7,500 - 14,999	2.2	12.1	9.1
≥ $15,000	0.7	2.8	2.1

Figure 30

PRIMARY PEDIATRIC AND PRENATAL CARE

NEEDS ASSESSMENT - 1982


■ Upper 33% MCH-Primary Care Need (≥1000 eligibles)
▨ Upper 33% Need (<1000 eligibles)
MASSACHUSETTS
10 0 10 20 30 40
SCALE IN MILES

Within each city and town the proportion of White, Black and Hispanic families falling within the three-family income categories was determined and applied to the childhood population figures previously determined. The estimated prevalence rates shown in the above Table were then applied to the family income and race-specific population data for each city and town to yield estimates of the number and percent of children with elevated blood lead levels. Towns were then ranked within Health Service Area (HSA) by the percent of children less than age five who potentially had a high blood lead level (Figure 31).

The recently lowered guidelines for the threshold level of lead above which there is poisoning from the Centers for Disease control cited earlier, may result in an estimated threefold increase in those eligible for the lead program. In addition, with improved case management, the lead poisoning program is now better able to determine communities at high risk.

Early Intervention Program Needs Assessment

In the spring of 1984 the Division convened a multi-disciplinary group to complete a Needs Assessment for Early Intervention Services. The needs assessment determined the number of biologically at-risk, environmentally at-risk, and established risk children for each of the 43 service areas. Using prevalence rates and population statistics, this information was analyzed for each service area. The areas were prioritized by determining the proportion of statewide need, and each area was assigned a needs score. The needs assessment determined that 25,417 children, 11.2% of all children from birth to three years of age, were eligible for Early Intervention services. 53% of those children were established risk, 5% were biological risk and 42% were environmentally at risk for developmental delays.

Day Care Needs Assessment

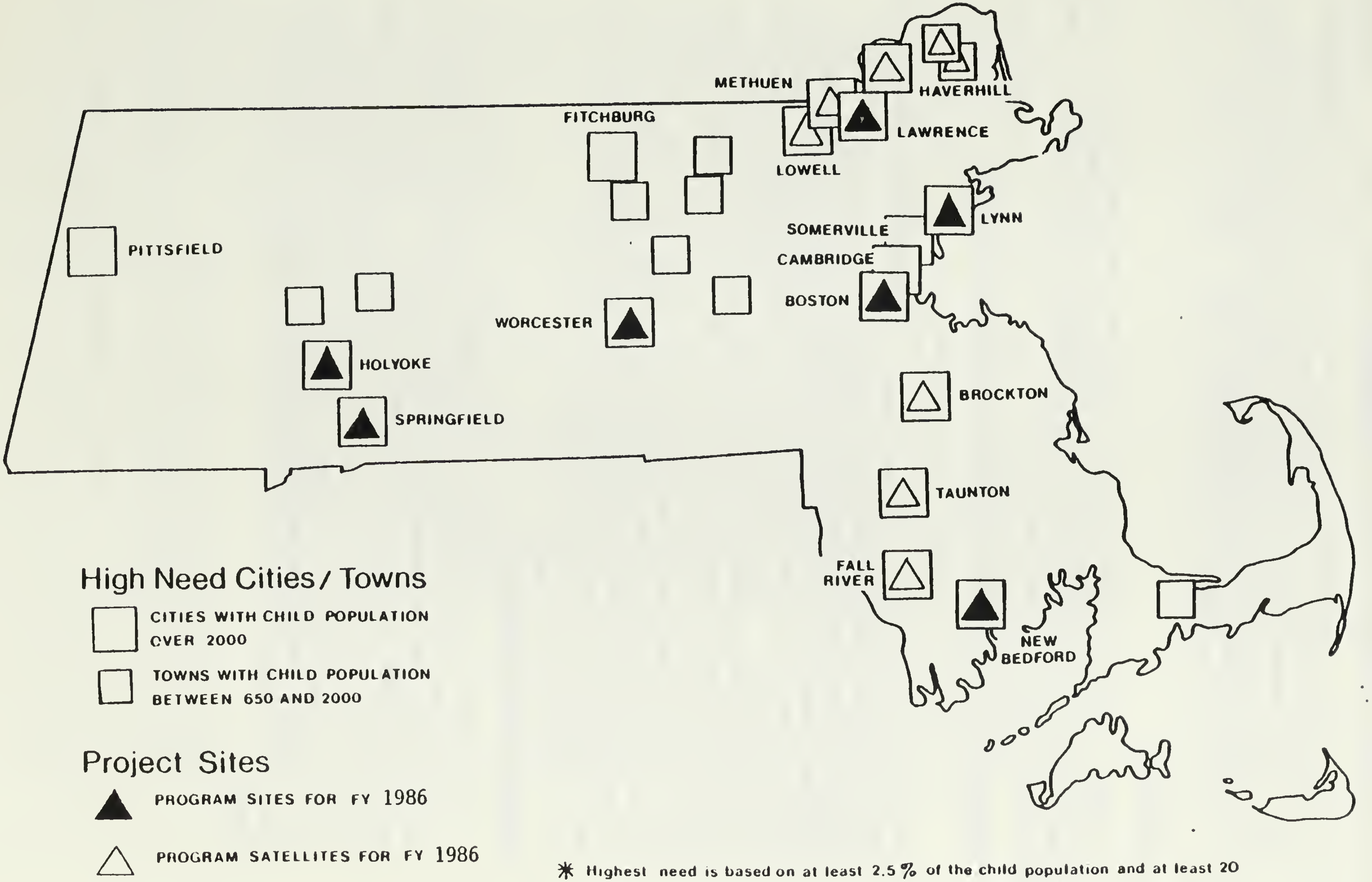
A survey of health practices and training needs in licensed Boston day care centers was conducted by the Division in 1984 to help define its role in preschool health. Results indicated that 40-50% offer screening for vision, hearing, nutrition and dental problems and 50-80% incorporate one or more health-related curriculum topics. Centers that are larger, have more health consultant hours, or are affiliated with a neighborhood health center, Head Start program or the Department of Social Services tend to offer more health services and request less assistance.

The survey revealed an unexpected degree of interest in providing more services and receiving training. From this needs assessment, it appeared that training in the reduction and prevention of communicable diseases should be integrated into a comprehensive preventive preschool health initiative, with strengthened linkages with existing community resources.

Figure 31

MCH LEAD PAINT POISONING PREVENTION PROJECTS

····CITIES / TOWNS WITH THE HIGHEST NEED* FOR SERVICES AND PROGRAM SITES FOR FY 1986



* Highest need is based on at least 2.5% of the child population and at least 20 children less than age 6 estimated to have high blood lead levels.

High Risk Infant Follow-Up Needs Assessment

The 1981 needs assessment for determining where services for high-risk newborns should be focused consisted of determining where there were areas with pockets of poor perinatal outcome. Areas that were high in three or more of the following rates were deemed in highest need of follow-up services: Teenage Delivery , Neonatal Mortality, and Low Birth Weight.

Future Efforts

In 1985, the Division plans to improve the previously-developed statistical methodologies and needs assessments in areas where systematic needs/indicator based methodologies have not been employed previously. They include:

Handicapped Children's Clinical Services Program

In conjunction with the Department of Maternal and Child Health and Aging of the Harvard School of Public Health and the Children's Hospital Developmental Education Clinic, the Massachusetts MCH program was awarded a three year federal "SPRANS" (Special Project of Regional and National Significance) grant to assess service needs of handicapped and chronically-ill children in the Commonwealth. Known as "Project Serve", the goals are to document existing services, both public and private, to identify unserved/overserved populations, to determine service gaps, and to provide the Division of Family Health Services with alternative service models as a means of resolving identified problems and improving the overall service delivery system. Data collection, analysis and model-development phases should be completed by the end of FFY'85, with implementation, testing and evaluation of models occurring in FFY'86.

Women's Health Program

A reproductive health working group convened by the Division has been meeting to identify the major reproductive health problems of women in Massachusetts, and to examine the health system which services these women. Information on the reproductive and gynecological needs of Massachusetts women is not readily available, and assessments thus far have relied on secondary sources. In FFY 1986, the working group will refine their analysis, developing a firm statistical base with health status and service indicators specific to women.

(B) STATEMENT OF GOALS AND OBJECTIVES

MISSION STATEMENT:

To promote the health of women, children and families by assuring access to quality health care for high risk and special need groups, and by developing and implementing strategies to prevent death, disease and disability.

GOAL I:

To improve the outcome of pregnancy and perinatal health status.

Objective I.1. To reduce the Neonatal Mortality Rate to 5.8 and the Infant Mortality Rate to 8.1 by the end of 1986 primarily through further efforts to reduce low birthweight births.*

Strategies to be Employed:

a. Target high-risk populations and geographic areas by strengthening existing regional planning of HSA's in this area; promoting and funding local/regional coalitions in high-risk communities; and providing technical assistance to such coalitions.
b. Provide training to providers which promotes culturally appropriate care for major linguistic and ethnic minority groups.
c. Develop and implement strategies to recruit minority personnel at all levels of provider services.
d. Develop comprehensive prenatal care standards and plan strategies to ensure their implementation statewide.
e. Expand high-risk infant follow-up services to ensure support for families once infants leave the hospital.
f. Conduct a statewide media campaign providing information on factors promoting healthy birth outcomes.
g. Conduct intensive community-based outreach in high-risk areas through community organizations.
h. Support innovative programs geared towards bringing "hard-to-reach" women into prenatal care, using community-based methods.
i. Improve statewide data collection and monitoring of maternal and infant health status.
j. Periodically review infant deaths and regionalized perinatal systems to evaluate service systems and to identify problems.

Objective I.2. To ensure access to quality prenatal care services to at least 4,000 low-income, high-risk pregnant women, particularly those who are uninsured.

* The NMR in 1983 was 7.1; the IMR was 9.0.

Strategies to be Employed:

a. Maintain and expand Maternal and Infant Care Projects in underserved areas of the state.
b. Conduct a statewide survey of postpartum women to identify factors which influence prenatal care utilization.
c. Develop and implement community-based models for the provision of comprehensive prenatal care.
d. Work with the Department of Public Welfare to develop a program to pay for maternity services for uninsured women.

Objective I.3. To support a regionalized perinatal network which identifies 10,000 high-risk infants throughout the state and monitors the follow-up services provided to these infants.

Strategies to be Employed:

a. Maintain and refine the newly initiated High-Risk Infant Identification (HRII) hospital reporting system.
b. Maintain support for improved discharge planning and linkage with community hospitals for Neonatal Intensive Care Unit infants.
c. Improve standards for community-based MCH nursing via protocol development and dissemination, training, in-service education and technical assistance. By the end of FFY 1986, 50% of all interested agencies will have been reached.
d. Develop stronger linkages between HRII perinatal health programs and early intervention programs.

Objective I.4. To increase public and professional awareness of Sudden Infant Death Syndrome and offer services to 100% of affected families.

Strategy to be Employed:

Continued support for the statewide SIDS program in providing autopsies, professional education and public awareness activities, referral and follow-up services for families, and coordination with the state medical examiner's office.

Objective I.5. To increase awareness and knowledge of genetic determinants of disease and to encourage utilization of genetic testing and counseling services when appropriate.

Strategies to be Employed:

a. Provide genetic education and information to the general public and targeted providers throughout the Commonwealth.
b. Assess the content of the genetics curriculum in certain high schools in the Commonwealth and provide input for revision.
c. Develop a surveillance system for monitoring spontaneous pregnancy loss.
d. Provide limited genetic counseling and referral at SHC clinics and other designated locations.

Goal II:

To improve the nutritional status of the Commonwealth's residents, with particular focus on high-risk pregnant women, infants and young children.

Objective II.1. To develop the capacity to serve as a statewide locus for ongoing study, analysis and surveillance of nutritional status and problems, to promote development and coordination of nutrition related services, and to formulate nutrition policies and standards through the newly established Office of Nutrition.

Strategies to be Employed:

a. Pilot, evaluate and refine a surveillance system to identify individuals already malnourished and those at risk, and identify problems and possible improvements in existing service systems.
b. Coordinate with other state agencies, particularly in regard to outreach.
c. Develop a referral network for children identified as malnourished, and participate in short and long term program planning for improvement in the service delivery network.
d. Provide professional and public information and education on nutrition related issues.
e. Develop program standards and nutrition policies for all Public Health programs and for statewide dissemination, including advocacy of adoption of nutrition quality assurance standards by all ambulatory health care agencies and relevant health professions.
f. Re-activate the Massachusetts Nutrition Board, which was mandated by state law, and has not met since 1980. The Board includes 9 gubernatorial appointees and representatives of 9 specified state agencies. The Board will serve as a vehicle to advise on state and interagency nutrition policy issues, and to promote strategies for improving nutritional status.

Objective II.2. To prevent malnutrition among pregnant women, infants and children.

Strategies to be Employed:

a. To maintain the women, infants and children (WIC) caseload of 63,000 participants during FFY'86, and to expand as funding allows.
b. Ensure referral of children screened for lead paint poisoning who evidence high EP levels, an indicator of anemia.
c. Target WIC services to high-risk groups, including Southeast Asians, in conjunction with MCH programs.
d. Develop strategies for promotion of breastfeeding among low income women.

e. Continued interaction with regional and national level WIC Administration to ensure that Massachusetts WIC receives an equitable appropriation commensurate with needs in the state.

Objective II.3: To ensure provision of comprehensive treatment services to severely malnourished children.

Strategies to be Employed:

a. Maintain and strengthen Failure-To-Thrive (FTT) programs funded in 4 major teaching hospitals across the state to serve 600 children and families.
b. Collect and analyze data on children suffering from FTT, in order to contribute to understanding of this condition and to plan appropriate services.

Goal III:

To reduce the incidence of preventable diseases and handicapping conditions among children.

Objective III.1: To provide access to comprehensive quality pediatric primary care service to 45% of the estimated 100,000 young children living in the high need areas served by Children and Youth Projects.

Strategies to be Employed:

a. Continue to support C&Y projects targeted to low-income, high risk populations, with distribution of any additional funds to high need areas.
b. Assure access to C&Y care for uninsured children through availability of sliding fee scales and maximization of third party reimbursements to projects.
c. Improve standards and contents for care by including periodicity schedules for well child care, dental care and injury prevention and by working with the state Medicaid agency to encourage C&Y projects to enroll as Project Good Health (EPSDT) providers.
d. Assess the special needs of minority population groups, including Southeast Asian refugees, and ensure that contracted programs adequately address these needs.

Objective III.2: To prevent and provide appropriate care and follow-up for childhood lead poisoning by screening 40% of all children between the ages of 6 months and 5 years, providing case management follow-up for all moderate, high and urgent risk classified children, inspecting 1500 dwellings, and deleading 1200 residences annually.

Strategies to be Employed:

a. Support the statewide Childhood Lead Poisoning Prevention Program (CLPPP) in developing standards, providing technical assistance and training; screening, managing and following up children; evaluating blood samples; inspecting and deleading homes; and otherwise enforcing Massachusetts lead poisoning statutes.
b. Fund community-based lead paint poisoning projects serving high need areas of the state and give particular support to creative collaborative approaches for lead poisoning prevention such as a loan subsidy program, supported by private lending institutions, designed to reduce interest rates on home improvement loans for deleading.
c. Include screening for lead paint poisoning in standards of appropriate MCH funded programs.

Objective III.3. To reduce the incidence of serious burns, poisonings and motor vehicle related (occupant, pedestrian, bicycle) injuries by 10% from the current level of 210 per 10,000 children by the end of FFY'87.

Strategies to be Employed:

a. Integrate successful approaches and techniques of Statewide Childhood Injury Prevention Program (SCIPP) and Massachusetts Passenger Safety Program (MPSP) within all relevant MCH program areas. By the end of FFY'86, age-specific program guidelines and protocols for injury prevention will be developed for appropriate MCH activities.
b. Maintain adequate support for the Massachusetts Poison Control System, and create a new position for coordination of public and professional education.
c. Conduct a needs assessment in primary care clinics and elementary schools; use results to develop and field-test training modules for preschool providers, primary care clinics and home care agencies.
d. Issue an RFP to fund demonstration grants in local agencies to implement comprehensive injury prevention modules.
e. Conduct and analyze a survey of legislators and other key providers and decision makers; develop marketing and promotional strategies for state residents based on findings.
f. Sponsor an injury prevention conference in each public health region in FFY'86.
g. Obtain the Uniform Hospital Discharge Data Set for FY 1983 and report on the over 100,000 cases of injuries to Massachusetts residents.
h. Develop a training program for hospital medical and records staff to improve existing data sets and coding procedures for injuries.
i. Develop a record-keeping system for violations of the state child passenger safety law and a training program to improve police enforcement of the law at the local level.
j. Implement additional car seat loaner programs in underserved areas.

k. Analyze and report on the 1984 statewide observational survey of seat belt usage.
l. Sponsor an annual statewide passenger safety conference.
m. Design and implement an educational program on the safe and appropriate transportation of handicapped children.

Objective III.4: To promote the incorporation of preventive health services and education into day care and preschool programs statewide.

Strategies to be Employed:

a. Interagency planning to develop priorities for training with Department of Social Services and other state agencies.
b. Initiate collaborative education, technical assistance, and service coordination efforts in selected locations among the Division, day care programs, health care providers, and other state or local agencies.
c. Continue to fund one or more preschool health projects to serve day care providers in high need areas.
d. Develop a comprehensive manual, Guidelines for Health in Day Care. Disseminate manual and other appropriate educational and training materials on preventive child health issues to day care providers statewide.
e. Sponsor a preschool health conference in each public health region in FFY'86 to promote the health Manual and provide training on day care health issues.
f. Develop and implement a health promotion and risk reduction project for preschool children in family day care homes in one of seven day care licensing regions of the state; apply for state funding for a comprehensive statewide preschool health initiative.
g. Pilot-test and implement a preschool injury prevention package for training preschool group and family day care providers.

Objective III.5: To promote improved school health services in all of the Commonwealth's public schools.

Strategies to be Employed:

a. Monitor all school health systems for compliance with state regulations.
b. Analyze benefits and costs of selected school health services and propose any needed changes in statutes or regulations.
c. Provide regular in-service education programs on a regional basis to school nurses.
d. Expand school health program planning and practice materials available to school systems.
e. Work cooperatively with the Division of Communicable and Venereal Diseases to ensure immunization of all children attending preschool programs and all school-age children.

f. Work cooperatively with Services for Handicapped Children staff and the Department of Education to improve knowledge, skills, and level of services available in public schools to children with special medical needs.

Objective III.6: To promote prevention of child sexual abuse through education and information.

Strategies to be Employed:

a. Provide technical assistance and support for community sexual abuse and rape prevention presentations at rape crisis centers as well as schools, churches, and day care centers.
b. Provide inservice training to parents and childcare providers.
c. Design public service messages.
d. Offer information and referral to professional and lay public.
e. Establish a working group to coordinate Departmental efforts toward decreasing the incidence of child sexual abuse.
f. Work cooperatively with community-based violence prevention programs to secure federal Centers for Disease Control funding for new innovative prevention efforts.

Objective III.7: To identify strategies to further prevent childhood mortality.

Strategies to be Employed:

a. Complete collection and analysis of data on child deaths in 1985.

b. Work collaboratively with other state agencies, experts and advisory groups to recommend strategies based on the findings.

Goal IV:

To comprehensively address the special health needs of adolescents.

Objective IV.1: To provide comprehensive medical and supportive services to 15% of the estimated 7500 pregnant adolescents under age 20 during FFY'86.

Strategies to be Employed:

a. Continue to fund comprehensive adolescent pregnancy programs.
b. Emphasize outreach and services for adolescents in Maternal and Infant Care Projects.

c. Work with the Governor's Office, Executive Office of Human Services and other state agencies to improve the coordination of services and develop new and expanded service models.

Objective IV.2: To provide comprehensive medical and preventive counseling services to 15,000 at-risk adolescents and education services to 15,000 teens, parents and professionals during FFY'86.

Strategies to be Employed:

a. Continue to fund comprehensive adolescent health programs throughout the state.
b. Provide educational presentations for health care providers on adolescent health issues.

Objective IV.3: To develop strategies to reduce violence-related morbidity and mortality among adolescents.

Strategies to be Employed:

a. Complete the state-funded study of 1985 child deaths, and use findings to identify strategies to prevent deaths to adolescents due to suicides, homicides and accidents.
b. Seek advice from the Family Health Services Advisory Council, providers of family health services, experts and advocates on strategies to reduce violence among adolescents.
c. Utilize findings from SCIPP research on injury incidence among adolescents to evaluate service needs for this population.

Goal V:

To decrease the incidence of morbidity and mortality related to selected health issues affecting Massachusetts women.

Objective V.1: To increase the systematic collection of Massachusetts specific data on selected women's health issues to provide information essential for planning.

Strategies to be Employed:

a. Utilizing available data, assess women's needs for gynecological and reproductive health services. Identify major problems, gaps in services and data, priorities for services and special needs of minority women.
b. Maintain monitoring and needs assessment systems for sexual abuse services.
c. Maintain an evaluation tool for assessment of services being provided to women in prison.

Objective V.2: To increase public knowledge on selected issues affecting the health and well being of women in the Commonwealth.

Strategies to be Employed:

a. Provide education to community groups on gynecological and reproductive health issues.
b. Plan and implement a statewide conference, entitled "Women in the Workplace," on issues and concerns associated with women and occupational health.
c. Provide education on rape and sexual abuse for the general public, community groups, health, social service and criminal justice personnel.
d. Provide education on prevalence and origin of family violence for general public and professionals.

Objective V.3: To provide services for selected groups of underserved women.

Strategies to be Employed:

a. Based on needs assessments, develop goals, objectives and workplans to improve gynecological and reproductive health services, particularly for high-risk women.
b. Continue comprehensive preventive and treatment services for victims of sexual assault.
c. Provide workshops and educational materials on office worker health protection to selected target groups.
d. Provide a health program for women in prison that includes attention to reproductive, nutrition, STDS, stress, substance abuse, parenting and other relevant health issues.
e. Provide diagnostic evaluations through approved centers for daughters and sons of women exposed prenatally to diethylstilbestrol (DES).

Goal VI:

To provide a comprehensive range of preventive, therapeutic, supportive and specialized medical and rehabilitative services for children who are disabled or at risk for disability, and their families, in order to support optimal development and prevent institutionalization.

Objective VI.1: To provide technical assistance and/or case management services to 30% of children receiving Supplemental Security Income and to other disabled children, particularly those served through other Division programs, in FFY'86.

Objectives to be Employed:

a. Through the Case Management Services Unit, continued outreach to SSI recipients not enrolled in the SHC program, and provision of appropriate levels of services, including development and monitoring of individual service planning.

b. Identification of SHC clients in need of case management services; assessment of the level of service required; provision of technical assistance; assistance in development of individual service planning and case coordination services; and continued promotion of inter-unit collaboration.
c. Provide technical assistance, information and training to other MCH programs on resources for handicapped children.
d. Provide technical assistance, consultation, and training to other public/private agencies on federal and state entitlements and services available to handicapped children and their families.
e. Continue interagency collaboration by participation on interagency task forces and committees to ensure a coordinated service delivery system.
f. Continue parent/guardian training to enhance parental ability to more effectively advocate for their disabled children.
g. Pending approval of a Home and Community Based waiver, provide case management services to the chronically ill and severely multiply handicapped children served under the waiver.

Objective VI.2: To provide uniform, high quality early intervention services to 13% of the 25,417 birth to 3 population and their families who are in need of these services.

a. Evaluate the impact of the recently implemented program guidelines/standards, and revise them as necessary.
b. Integrate the client-specific data system with a financial management system.
c. Implement a client transportation system.
d. Continue outreach and public education in regard to early intervention services.
e. Increase linkages with other MCH programs, particularly the High-Risk Infant Identification (HRII) system.
f. Improve coordination at both the state and local levels with other state agencies.
g. Work with legislature and advocacy groups for passage of private third-party insurance coverage for Early Intervention services.

Objective VI.3: To provide a range of necessary support services to families of multiply handicapped children in order to allow them to keep their children in the home or community.

Strategies to be Employed:

a. Continue to provide training, respite, home health care, and camperships to multiply handicapped children living at home.
b. Pending approval of the Medicaid Home and Community Based Waiver, determine eligibility for and arrange provision of the services covered under that waiver for chronically ill and severely multiply-handicapped children who would be institutionalized without these services.

c. Broaden the base of care providers by providing resources for training of specialized foster care providers and home health aides, and utilize innovative techniques to attract foster and adoptive families and home health care/respite workers for this training.
d. Work with other state human service agencies to develop a continuum of needed services for multiply-handicapped individuals and address the issues of eligibility criteria, spectrum of services and funding.
e. Implement the newly revised regulations for Pediatric Nursing Homes to improve the programs and insure the appropriate placement of individuals in these facilities.
f. In conjunction with the Executive Office of Human Services and other state agencies, study the needs of two particularly underserved populations - disabled individuals over 22, including pediatric nursing home residents; and head injured children and adults. Contribute to development of pilot projects to address their needs.
g. Develop RFP's for outreach and training, developmental day and integrated preschool services for FFY'87-'89.
h. Expand upon the successful adaptive housing program for eligible families around the state.

Objective VI.4: To provide, or to ensure provision of, clinical services to handicapped children who lack access to those services.

Strategies to be Employed:

a. To continue to provide SHC clinic services to approximately 6,000 children under the current service model
b. By the end of FFY'86, implement a comprehensive, regionalized quality assurance program for the SHC clinic system.
c. Continue to provide limited financial assistance to families of chronically ill children who are not categorically eligible for other SHC clinic services.
d. By the end of FFY'86, begin implementing new service models developed and recommended by Project Serve.

Goal VII:

To provide leadership in developing policies, services and standards in the private and public health care system that contribute to a comprehensive approach to the health needs of mothers and children.

Objective VII.1: To provide policy makers and program administrators with a sound data base for planning for maternal and child health services and assessing health status.

Strategies to be Employed:

a. Continue to build computerized coordinated data systems containing information on health status indicators, eligible and at risk populations, service utilization information, etc.
b. Expand and refine systematic epidemiological methodologies for assessing need.
c. Carry out studies of diseases and conditions affecting the health of mothers and children, such as nutritional status surveillance
d. Evaluate the effectiveness of health care services and approaches.
e. Publish a report on Maternal and Child Health Status in Massachusetts by the end of FFY'86.
f. Complete an analysis of 1985 child and adolescent deaths which can be utilized to identify strategies to prevent unnecessary deaths.

Objective VII.2: To identify gaps in the health care system, including both service and financial assistance gaps, and to propose and advocate for appropriate solutions.

Strategies to be Employed:

a. Support efforts to improve coverage by third party payors by providing relevant data, making recommendations, and working with other groups to achieve workable solutions.
b. Work collaboratively with other private and public agencies and other concerned groups to coordinate services to such groups as multiply handicapped children and adolescents, which are at present notably fragmented.
c. Monitor the impact of changes in policies, statutes and regulations affecting maternal and child health.

(C) INFORMATION ON TYPES OF SERVICES PROVIDED, NUMBER AND CHARACTERISTICS OF INDIVIDUALS SERVED, AND PROGRAM DATA COLLECTED

The extensive table which appears on the following pages provides an overview of the services to be provided by the Maternal and Child Health Services program to achieve the goals and objectives stated in section (1) (B) above. Information is presented in tabular form regarding:

- program name;
- categories and characteristics of individuals to be served;
- numbers to be served in FY'86;
- types of services provided;
- data currently collected; and
- goals/objectives to which program is addressed.

TABLE 27
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
WIC	63,000 low-income pregnant, breast feeding and postpartum women, infants, and children up to the age of five who are determined to be at nutritional risk.	Individualized nutritional care which includes a food package, nutritional education, and health care referrals.	WIC has a computerized information system which is used for voucher production and collection of programmatic data.	II.2
Maternal and Infant Care Programs	4,000 high-risk, low income mothers and children in high need areas.	Prenatal and postpartum diagnostic and preventive ambulatory health care services; coordination with hospital care and delivery services; social service follow-up; dental care; nutrition and mental-health counseling; and translation services.	MCH Statistical summary, and perinatal registrant log.	I.2
Children and Youth Programs	45,000 preschool and school age children up to 21 in low income, high need areas.	Ambulatory health care including medical examinations and follow-up social services; dental care; nutrition and mental health counseling; and translation services. Coordination with hospital inpatient services.	MCH statistical summary.	III.1
Failure To Thrive Programs	600 children with FTT syndrome and their families.	Diagnosis and treatment of families with children who are severely underweight and who may have FTT syndrome. Case management, follow up and coordination of services. Consultation and education to community based pediatric health care providers.	Quarterly reports on utilization and health outcomes.	II.3

TABLE 27

TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Comprehensive Adolescent Health Services	15,000 high-risk adolescents in catchment areas of contracted programs.	Primary-care services for males and females; medical referrals; individual and group counseling and educational services focusing on nutrition, contraception, sexuality, adolescent pregnancy, and prevention of substance abuse; educational materials, and workshops for parents; outreach, informational, and referral networks.	Quarterly statistical reports, annual narrative reports, site visit - quality assurance reports.	IV.2
Pregnant and Parenting Adolescent Programs	1,500 pregnant or parenting teenagers in catchment areas of contracted programs.	Prenatal, postpartum and infant care, and referral and coordination with other service providers; services to partners; medical, nutritional and child-care education; support groups; family planning and education/job counseling.	Quarterly statistical reports, annual narrative report. Additional data from "Mass. Adolescent Pregnancy and Parenting Study" (MAPPS).	IV.1
DES (diethyl stilbestrol) Program	100 daughters or sons of women given DES during pregnancy.	Specialized diagnostic evaluations at approved medical centers across the state. Toll-free information number available.	Statistical reports.	V.3
High Risk Infant Identification System	High-risk infants. (Approximately 10,000 per year), including: . Infants at Hearing Risk . Premature Infants . Infants with Congenital Anomalies . Infants admitted to Neonatal Intensive Care Units.	Identification of high-risk infants at time of birth with referral to public and private primary care and specialty services. Technical assistance and education to hospitals and community-based providers. Ongoing evaluation of system. Standard setting.	Data on infants requiring intensive care and on specified perinatal morbidity and mortality. Data on infants potentially at risk. Linkage of birth certificate data with data from this system.	I.3

TABLE 27
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Neonatal Intensive Care Regional Development	All infants admitted to NICU's; community hospitals transferring mothers or infants to NICU's.	Support for improved discharge planning and linkage with community hospitals for Neonatal Intensive Care Unit infants via contracts with all Level III nurseries in state.	Quarterly statistical and narrative reports.	I.3
Infants at Risk for Hearing Loss; Premature Infants	Very low birth weight or premature infants and infants meeting hearing risk criteria (approximately 4,500 per year).	Coordination of services. Administration of hearing screening programs. Payment for uninsured hospital bills for premature infants (legislation pending).	Data from High Risk Infant Identification system on incidence. Program data on utilization and costs.	I.3
High-Risk Infant Follow-Up (Home Based Programs)	1,200-1,500 infants and families at-risk due to perinatal morbidity or social-economic-psychological factors in program catchment areas.	Provides community-based support, education, consultation, and referral services to infants and families primarily through home visiting. Provides linkage between NICU and community services and providers for a selected population.	Semi-annual statistical and narrative reports.	I.3
Preschool Health Services	All children in preschool and daycare programs in catchment area of contracted program(s); daycare staff statewide.	Service program: preventive health services, individual assessments, inservice education and consultation with program staff, parent education. Daycare staff and programs: Training materials, including comprehensive manual, Guidelines for Health in Day Care. Workshops, conferences, and courses.	Semi-annual statistical and narrative reports for contracted services; Statewide needs assessment.	III.4

TABLE 27
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
School Health Services	All school-age children in the Commonwealth; school health services staff.	Standard setting; enforcement of regulations for school health services; in-service education, technical assistance and consultation for school health professionals; regulation of administration of psychotropic drugs to school-age children; liaison with school health-related programs in other state agencies.	Data collected on vision, hearing, and postural screening activities, and administration of psychotropic drugs in schools throughout the Commonwealth.	III.5
Hearing Aid Program	Children up to the age of 21 who are determined to need a hearing aid and who meet financial eligibility criteria. Hearing aid repair services are provided for all aids purchased. (Approximately 400 aids purchased yearly.)	Purchase of hearing aids; payment for hearing aid repairs.	Demographic, financial, and diagnostic data on children receiving hearing aids under this program.	I.3
Sudden Infant Death Syndrome	Approximately 110 families each year who lose an infant to Sudden Infant Death Syndrome.	Postmortem examinations, home visits and family counseling, referrals to appropriate agencies, community education.	Data collected and reported on demographics, parental reaction to problem; clinical data on the nature of S.I.D.S. also analyzed.	I.4

TABLE 27
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Statewide Childhood Injury Prevention Program	All children and youth 0-19 years of age in Massachusetts.	Provision of epidemiological data on injuries. Systematic training and technical assistance to providers of children's health services, schools, hospitals, researchers, and other state health departments. Injury Prevention Resource Center, which provides a comprehensive resource for health professionals, schools, business and industries, and others interested in injury control.	Massachusetts Vital Statistics data on injury-related mortality (1969 - 1982). Mass. Hospital Discharges for injuries (1982). Population-based injury surveillance system data (ER and and admissions, 1979 - 1982). Survey of Medical Record Professionals (1985). Elementary School Needs Assessment (1985). Key Informant Survey (1985). Household Telephone Survey of preventive behaviors related to injuries (1980 & 1982). Injury Case Control Study (1982). Camp Injury Data (1984). Poison Control System Call data (annually). Housing Inspection Surveys (1981 - 1982).	III.3

TABLE 27
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Mass. Passenger Safety Program	All residents of Massachusetts.	Statewide coordination of public and private agencies involved in promoting passenger safety; clearinghouse for occupant restraint information and related materials; implement public information campaigns and training programs/conferences; pursue appropriate legislation, regulatory and enforcement initiatives; conduct observational surveys of occupant seatbelt usage or other program evaluation as appropriate; promote occupant safety as part of comprehensive health education curricula in schools; promote and coordinate carseat loaner programs.	Survey of child restraint and seatbelt usage, 1984; Registry of Motor Vehicles death and injury data.	III.3
Environmental Hot Line	3,000 pregnant women, spouses and health care professionals - estimated utilizers. Open to all state residents.	Information on the effects of hazardous substances on the health of pregnant women and their unborn children through a toll-free number.	Quarterly statistical and narrative reports.	I.1
Poison Prevention	All residents of Commonwealth; approximately 80,000 calls annually.	Toll free 24-hour telephone hotline for parents and health professionals on poisonous substances and treatment methods.	Semi-annual statistical and narrative reports.	III.3

TABLE 27
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Statewide Childhood Lead Poisoning Prevention Program	Statewide 148,000 children under 6 years of age will be tested for lead poisoning. Efforts will be targeted to children at highest risk. Programs funded through Block Grant cover seven catchment areas: Boston, Worcester, Greater Lawrence, Greater Lynn, Springfield, Holyoke, and high-risk urban areas in Southeastern Massachusetts.	Door to door and/or on site screening, laboratory testing of blood samples, medical management and follow-up of lead poisoned children, environmental hazards investigation, and enforcement of statutes to delead housing built before 1950. Coordination with other state program areas (day care, child health programs, WIC, etc.).	Data for each child screened includes demographics, lead and/or E.P. level, and screening source. Quarterly statistical and narrative monitoring reports from contracted programs. Statewide Case Management data on Class II, III, and IV children.	III.2
Specialty Clinics for Handicapped Children	6,000 children with designated handicapping conditions,* and a limited number with chronic diseases	Diagnostic and treatment services based on an interdisciplinary approach, including input from the following disciplines: medicine, physical therapy, occupational therapy, social service, public health nursing, and others as appropriate.	Computerized client information system with demographics, diagnosis and referral source, monthly clinic attendance report. Annual report generated describing client population and services provided.	VI.4
Genetics Program	1,500 newborns in Massachusetts with a serious genetic condition and their families, targeted providers, and the public.	Information, education, surveillance and limited counseling and referral.	Clinic service statistics, data on adverse reproductive outcomes.	I.5

* Conditions covered include orthopedic, cerebral palsy, neurologic, seizures, myelodysplasia, cystic fibrosis, oro facial, plastic, cardiac, hemophilia, PKU, inborn errors of metabolism, and developmental delays.

TABLE 27
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Developmental Day Programs	25 severely multiply-handicapped children ages 6 months to 7 years.	Comprehensive services in which physical, occupational, speech therapy and skilled nursing care are provided in combination with an educational program of developmental stimulation and training in self-help skills for severely multiply-handicapped children. In addition, a parent education program offering training in child care and management techniques, guidance and counseling.	Data on individuals requesting services, semi-annual report on utilization and staffing.	VI.3
Adaptive Housing Modifications	30-50 handicapped children up to age 18.	Housing modifications to enable children to become more independent in the home.	Data on individuals receiving service.	VI.3
Special Medical Need Program	25 chronically-ill children up to age 18.	Payment for a range of necessary medical and rehabilitative services for children ineligible for other SHC clinic programs.	Data on individuals receiving service.	VI.4
Early Intervention Services	3,300 children ages birth to three years who are at established, biological, and environmental risk for developmental delay.	A planned program of developmental stimulation which promotes maximum physical, social, emotional and cognitive development. Nurses, social workers, child development specialists, occupational, physical and speech therapists work as a team with individual families on home visits and with small groups of parents and/or children. The focus is to support parents in the care and management of their child at home.	Annual narrative on overall program operation, utilization and staffing. Data system to record client'sspecific demographic, diagnostic and service data. Semi-annual reports will be generated.	VI.2

TABLE 27
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Integrated Preschools	65 children ages 3 to 6 years with physical handicaps.	A developmental program in which occupational, physical and speech therapy are integrated in an early childhood curriculum to promote physical, social, emotional, and cognitive development. The school integrates handicapped students with able-bodied students. Parents participate in their child's program and in parent groups. A social worker is available to coordinate services needed by the child and his family.	Data on individuals requesting services, semi-annual report on utilization and staffing.	VI.3
Respite Services/ Training	540 children enrolled in handicapped children's clinics, their families and other multiply-handicapped children and their families.	Therapeutic services including nursing and physical therapy provided within the home, home health aides, camperships, and short term pediatric nursing home stays. Training program for parents to provide specialized home care.	Data on individuals requesting services, semi-annual report on utilization and staffing for contracted programs, reports from social workers for home care programs.	VI.3
Pediatric Nursing Homes	260 multiply handicapped children through age 21 requiring nursing and medical care and determined eligible by the state Medical Review Team. Homes privately owned and operated with payment primarily through third party payors	Skilled nursing care and intensive therapeutic care in a Level II Medicaid certified facility.	Data on individuals receiving or requesting nursing home care. This data includes medical history, social history, and core evaluations. Reports on admissions to and discharges from residential care to pediatric nursing facilities and nursing home census for each nursing home.	VI.3
Epilepsy Drug	170 low income individuals for whom seizure control drugs have been prescribed.	Purchase of seizure control drugs.	Data includes demographics, financial eligibility, and drugs prescribed.	VI.4

TABLE 27
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Rheumatic Fever	437 low-income individuals with diagnosis of rheumatic fever for whom prophylactic penicillin has been prescribed.	Purchase of penicillin.	Demographic data.	VI.4
Case Management Services (Supplemental Security Income-Disabled Children's Program)	Handicapped children under 18 are the target population, with priority to SSI recipients and children served through other SHC and MCH programs. Estimated 2,200 children and families will receive some level of service through the case management gradient system.	Outreach, advocacy, training and case management for provision of coordinated and comprehensive services (medical, educational, social, developmental, and rehabilitative) through case coordination, technical assistance, the development and monitoring of individual service planning and limited last-dollar funding for interim services until barriers are resolved.	Computerized data system which includes demographics, identification of child's disabilities, service needs, and patterns of service delivery with identified barriers. Annual report generated.	VI.1
Medicaid Home and Community-Based Waiver Services	180 chronically-ill or multiply-handicapped children, birth to age 22, who are institutionalized or at high risk of institutionalization; who are already Medicaid eligible or who would be Medicaid eligible if in an institution.	Pending approval of the waiver, children certified as eligible by the Medical Review Team would receive Medicaid funded case management, respite care, environmental modifications, extended home health services, therapeutic day care, transportation, personal emergency response system and emergency utility back up, arranged by the MCH program in accordance with a service plan.	Data on number and type of clients, type and duration of services and cost of services.	VI.3
Rape Prevention and Victim Services	Approximately 3,000 victims of rape/sexual abuse statewide and their significant others.	Crisis counseling, advocacy through medical, law enforcement and legal systems, and follow-up counseling for victims and significant others. Preventive education programs to professional and community groups.	Statistical profile of type of assault, place of assault, victim and assailant. Documentation of services provided.	V.3

TABLE 27

TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Family Violence and Sexual Abuse Programs--Resource Center	Approximately 300 low-income and women of color throughout the state. Approximately 100 service providers in rape crisis centers/battered women's shelters throughout Massachusetts.	Educational workshops on prevention of violence and sharing of resources.	Evaluation of consumer satisfaction, increased awareness of resources.	V.2
DES/Public Information and Education	150,000-300,000 mothers, daughters and sons that may have been exposed to Diethylstilbestrol (DES).	Cancer Information Service provides mechanism for dissemination of DES exposure information as it relates to cancer and physiological changes. Educational workshops on DES/reproductive health issues for schools, community groups and worksites.	Demographic profile of caller. Also numbers of callers by date.	V.2
Reproductive/Gynecological Health Education	College students and surrounding community women 18 years and elder with an emphasis on low income and minority women.	Reproductive and fertility problems; professional education via workshops, grand rounds and information dissemination. DES/Western provides educational workshop in Western Mass. Workshops on gynecological/reproductive health problems and issues in worksites, clinics, community organizations.	Evaluation of educational workskhop by participants and DES Action; evaluation of health education program.	V.2
Occupational Health/Office Workers	Approximately 2,000 office workers in both worksites and community education programs.	Educational workshops on health and safety issues (ergonomic, job design, and effects of automation) affecting office workers. Offered in workplaces, community schools and job training programs.	Evaluation of effectiveness of services in increasing knowledge on topics coverage.	V.3

TABLE 27
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Occupational Health/"Women in the Workplace" Conference	Approximately 1,200 individuals to attend workshops and follow-up training sessions, as requested.	Educational training sessions, on numerous occupational health issues, to be presented during 2-day conference.	Client satisfaction questionnaires.	V.3
Womens Health and Learning Center	Approximately 500 women imprisoned (and post-release) in Massachusetts Corrrectional Institutions.	Health education workshops, individual and group counseling and clinical consultation.	Evaluation of effectiveness of services in increasing knowledge on topics covered.	V.3

The geographical locations of program and project sites of services described above are shown on the following set of maps (Figures 32 to 39). For clarity and ease of comparison with needs assessment data, similar programs are grouped on each map:

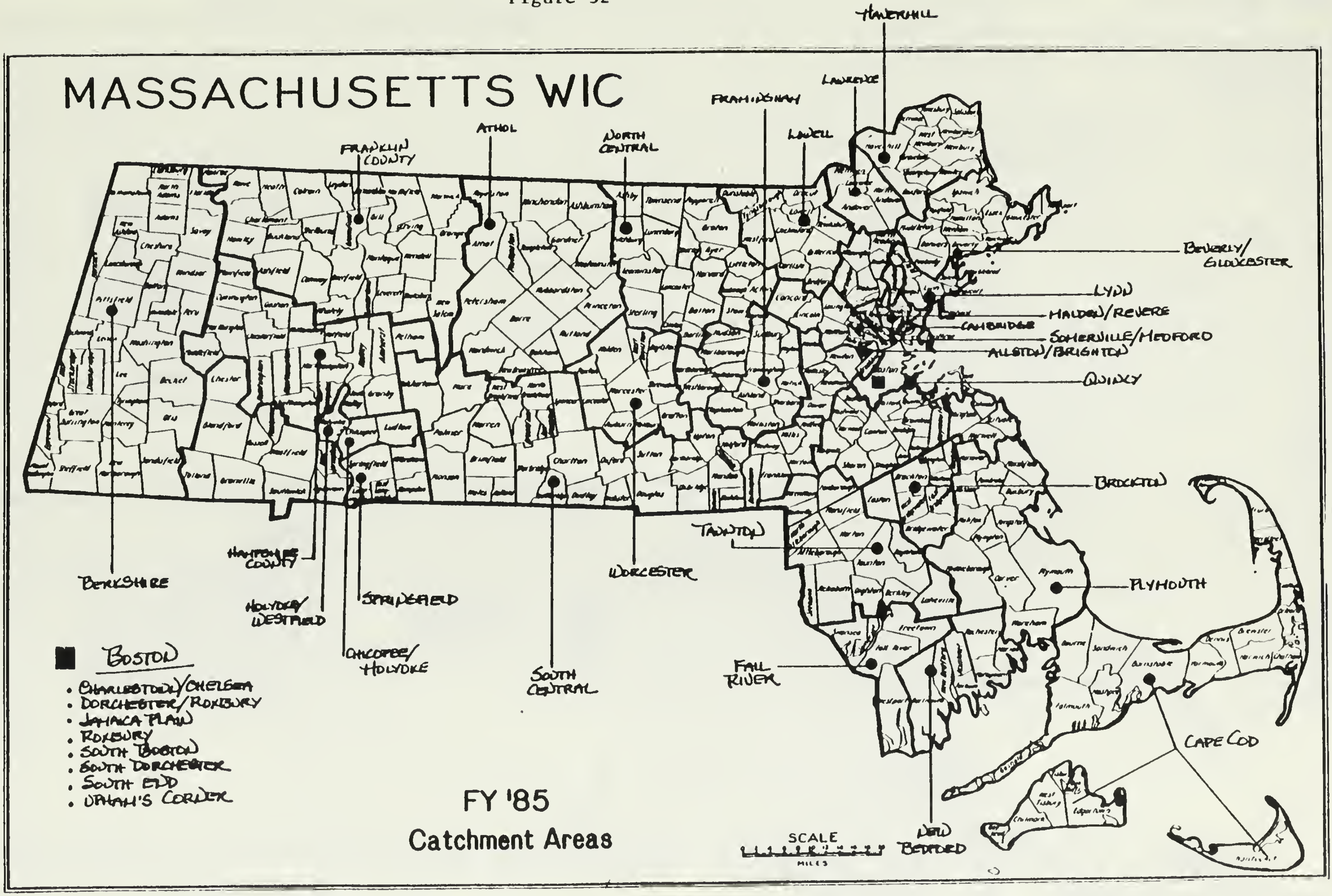
Figure 32. WIC Programs
Figure 33. Services for Handicapped Children, Specialty Clinic Sites
Figure 34. Community Services for Multiply-Handicapped Children Program Sites
Figure 35. Early Intervention Program Sites
Figure 36. Primary Care Project Sites
Figure 37. Adolescent Pregnancy and Health Program Sites and Service Areas
Figure 38. Perinatal and Preschool Health Program Sites
Figure 39. Women's Health Services

(Lead Poisoning Prevention Program sites are included in the needs assessment section.)

A number of the services described earlier are not shown on the maps. Some of these are statewide services or payment for 2 services programs used by highly-specified groups (e.g. epilepsy drugs) and handled through our central or regional offices. Others, such as the SIDS, hearing aid and hearing evaluation programs are available statewide through highly-diversified sources (e.g. community-health nurses in over 20 home-health agencies and hearing-evaluation centers across the state.)

A close inspection of these service-area maps will reveal some differences from the needs assessment maps displayed earlier. In some instances, the lack of service sites in high-need areas reflects the gap between the Division's combined state and federal budgets and the enormity of unmet need. In other cases, principally in the areas of primary care and specialty clinics, the locations of service sites have strong historical precedents which have not always been shifted as population characteristics and the availability of private sector services have changed. Needs assessments completed for primary-care programs, lead and WIC have led to the location of more program sites in high-need areas, and the recently-initiated assessment of Services For Handicapped Children's clinics should result in improved targeting of these services to populations in need.

Figure 32



N.B.: Catchment Areas will remain status quo until WIC RFP decisions are finalized in Spring 1986.

Figure 33

SERVICES FOR HANDICAPPED CHILDREN SPECIALTY CLINIC SITES - 1986

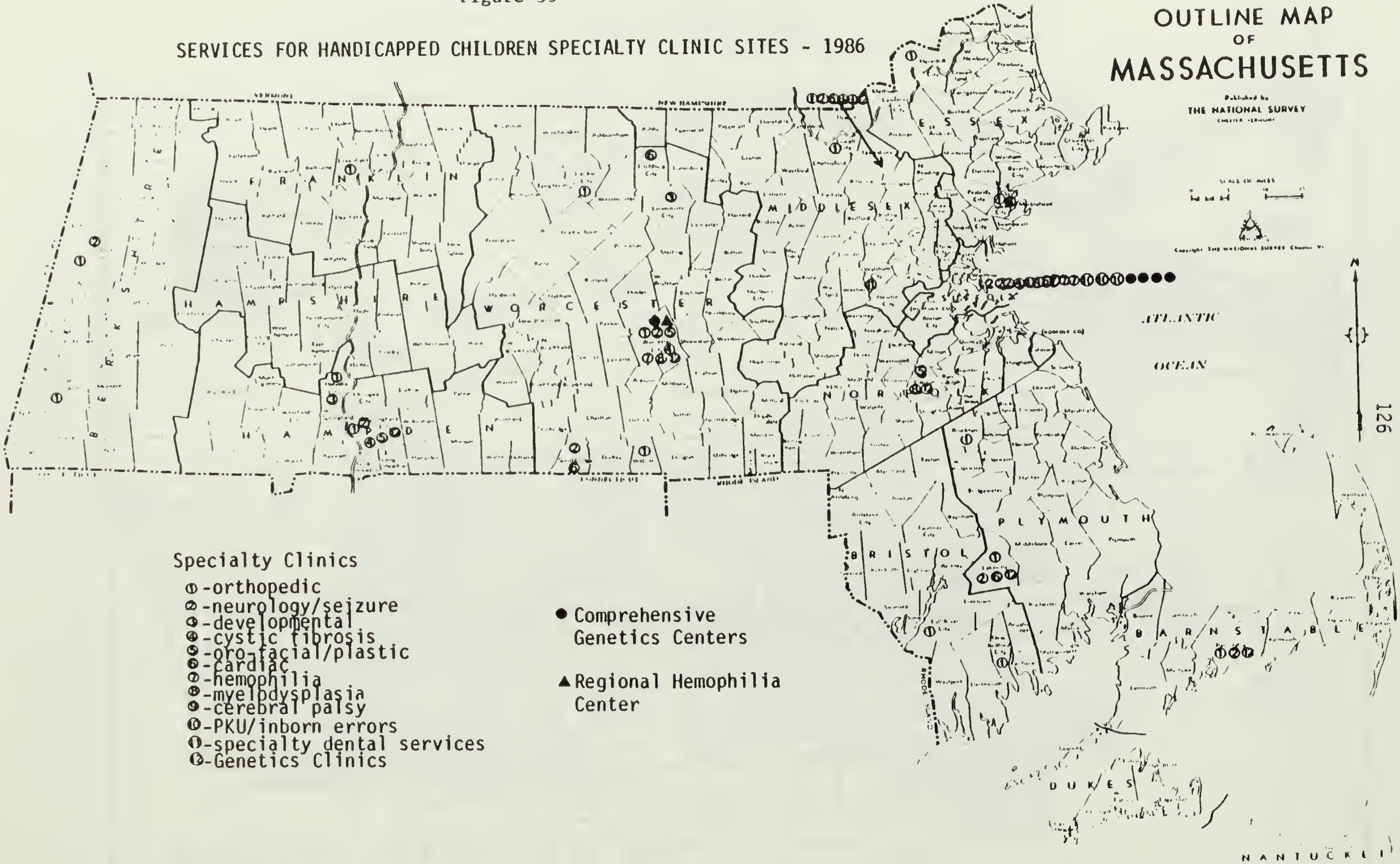
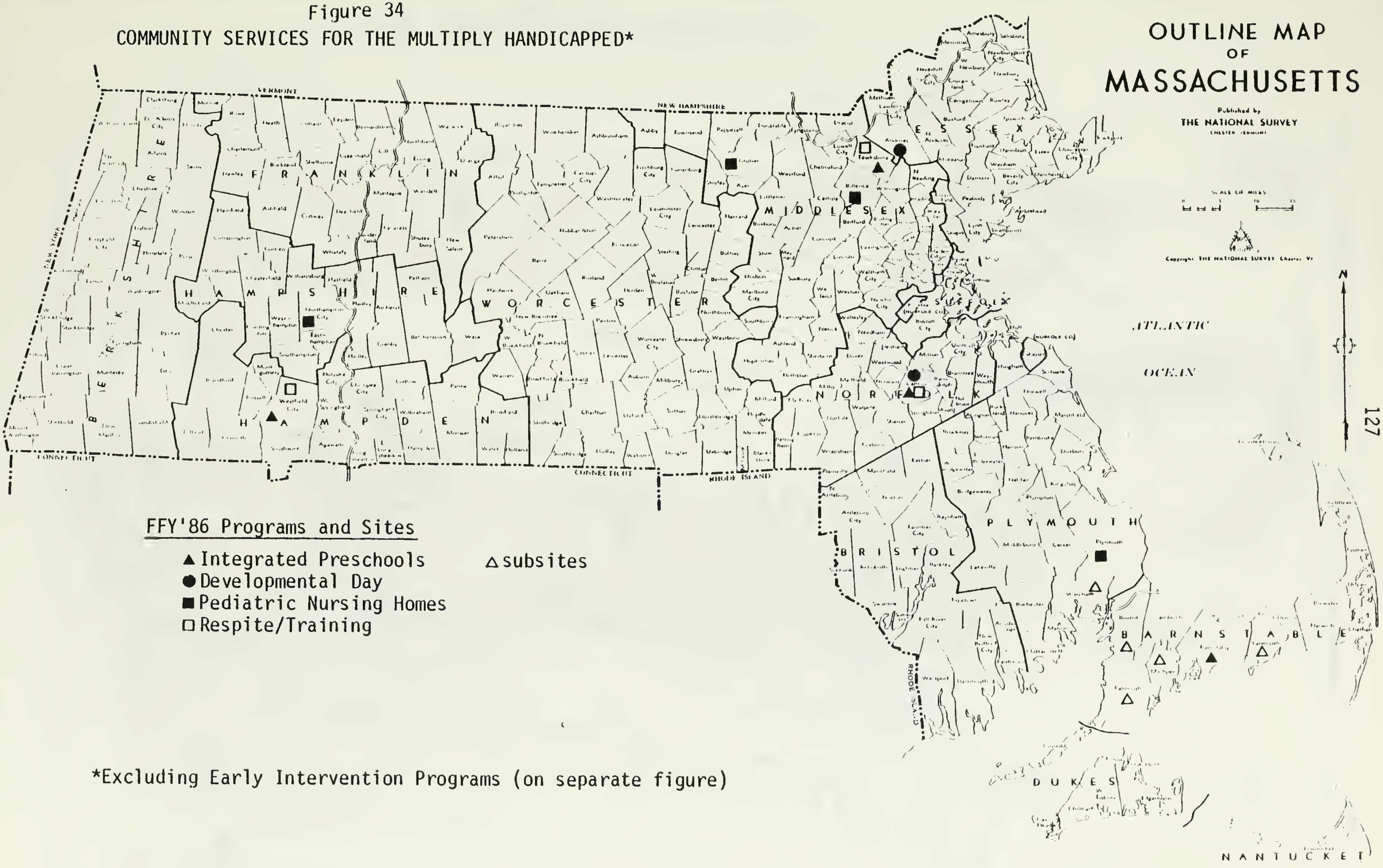


Figure 34

COMMUNITY SERVICES FOR THE MULTIPLY HANDICAPPED*



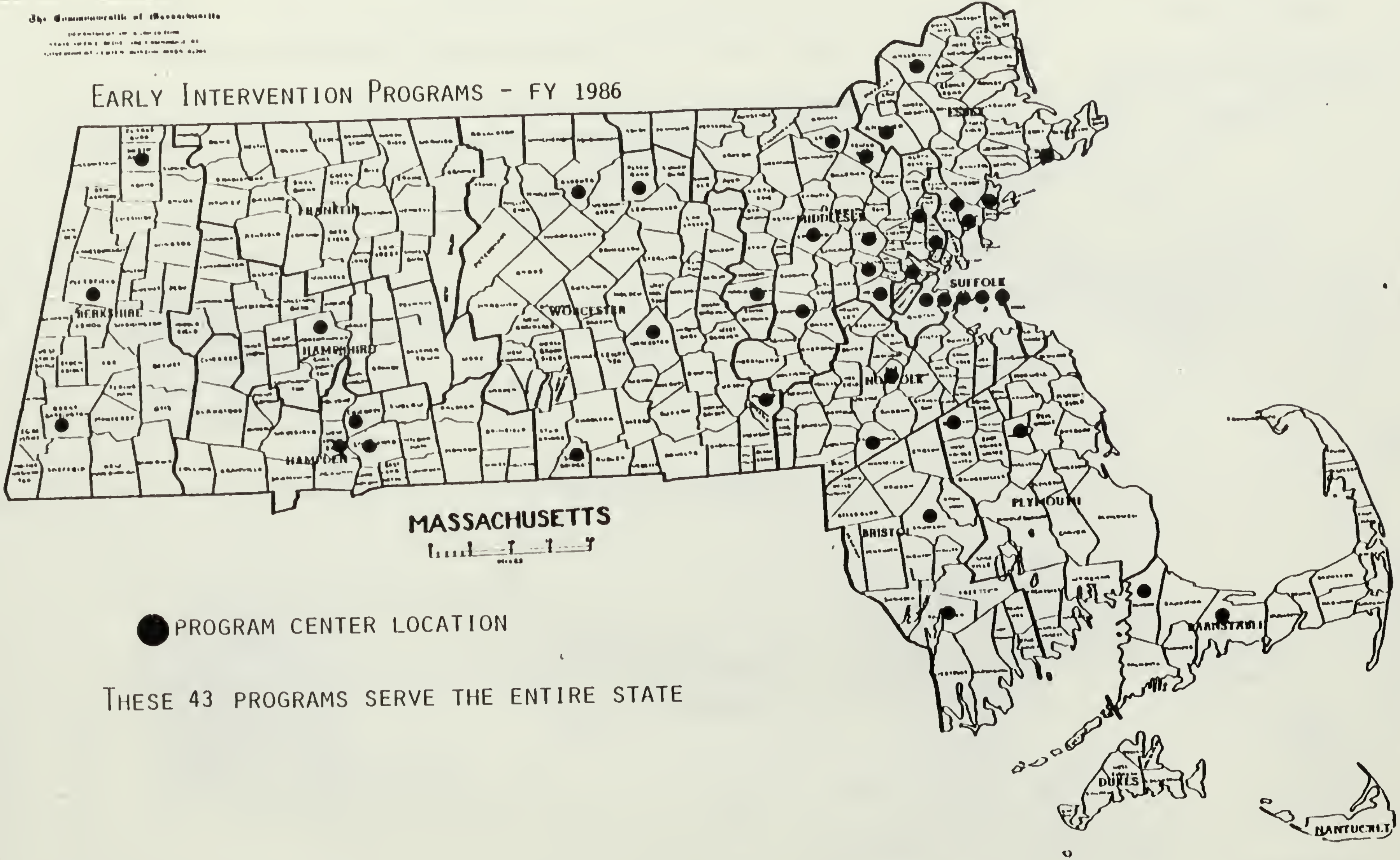
FFY'86 Programs and Sites

- ▲ Integrated Preschools
- ● Developmental Day
- ■ Pediatric Nursing Homes
- □ Respite/Training
- △ subsites

*Excluding Early Intervention Programs (on separate figure)

Figure 35

EARLY INTERVENTION PROGRAMS - FY 1986

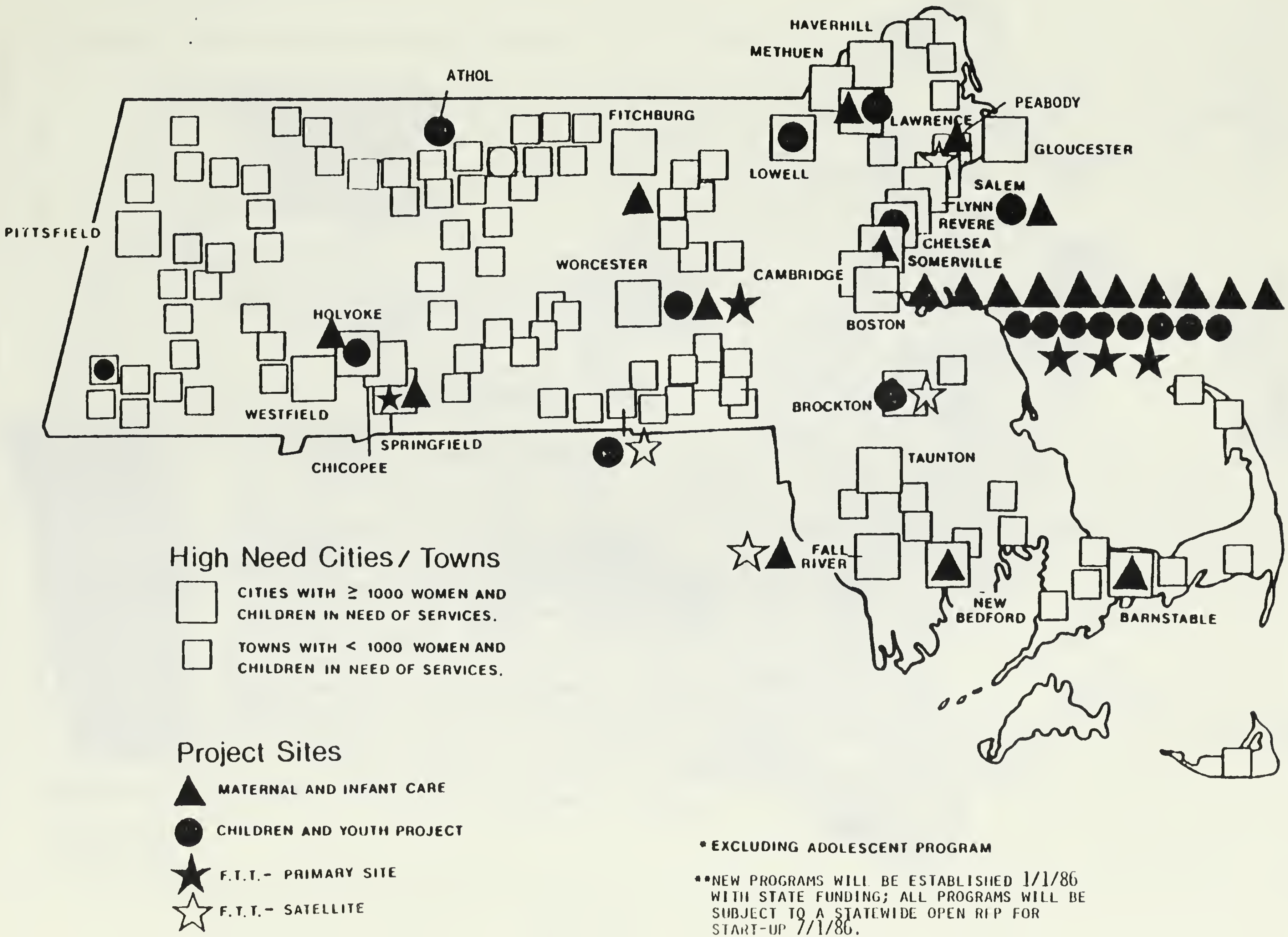


● PROGRAM CENTER LOCATION

THESE 43 PROGRAMS SERVE THE ENTIRE STATE

Figure 36

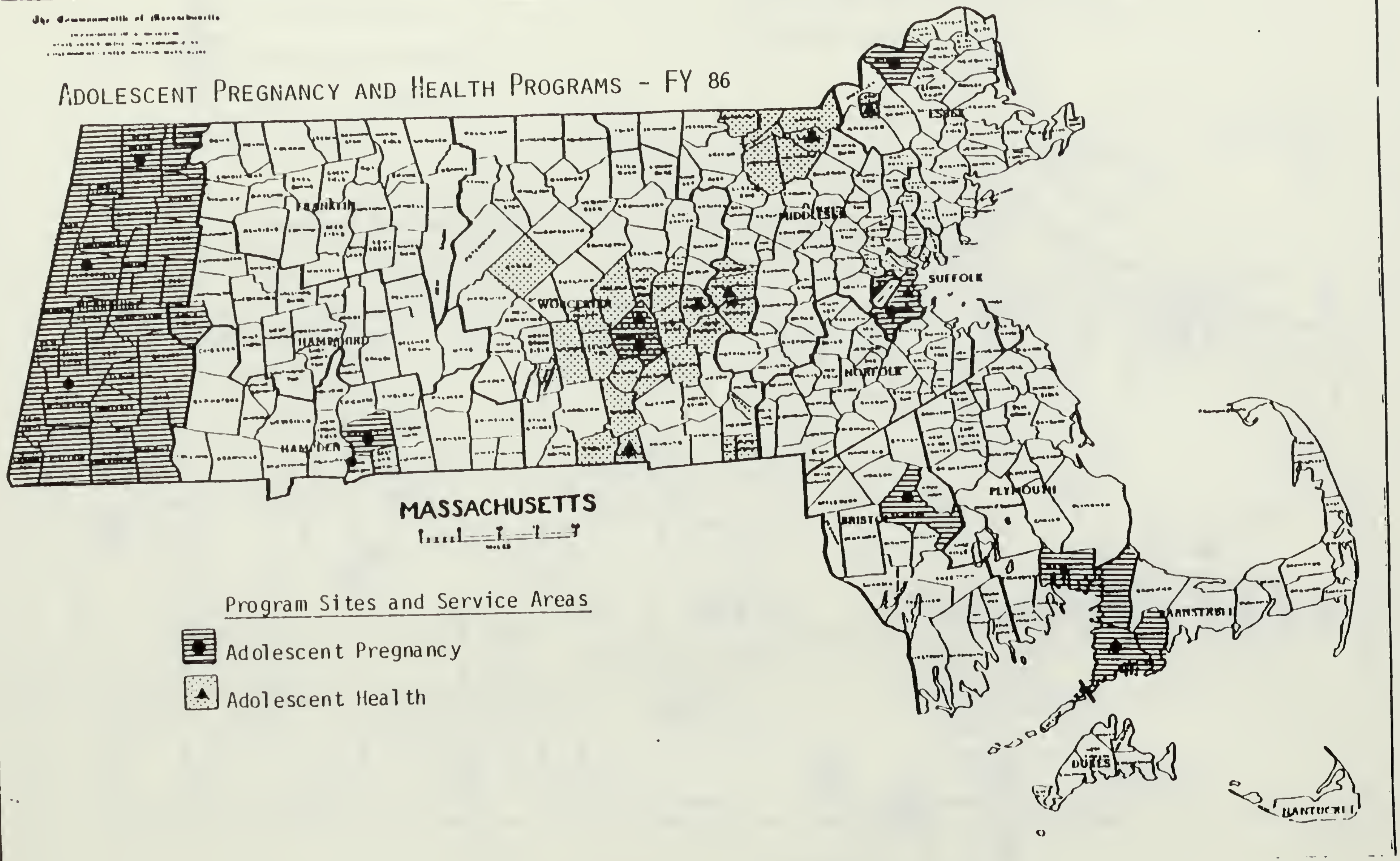
FY 86 PRIMARY CARE SITES * **



* EXCLUDING ADOLESCENT PROGRAM

** NEW PROGRAMS WILL BE ESTABLISHED 1/1/86 WITH STATE FUNDING; ALL PROGRAMS WILL BE SUBJECT TO A STATEWIDE OPEN RFP FOR START-UP 7/1/86.

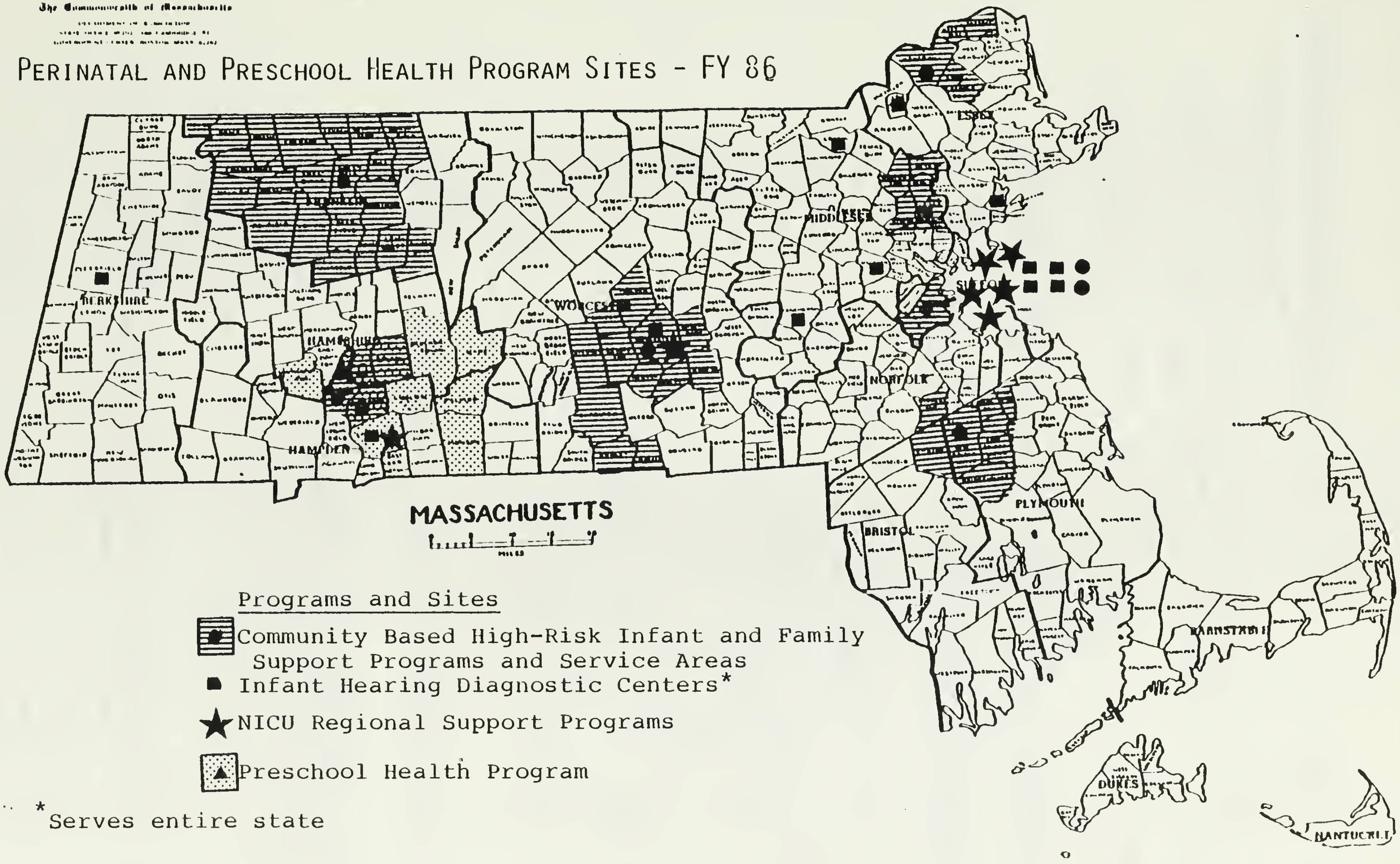
Figure 37



ADOLESCENT PREGNANCY AND HEALTH PROGRAMS - FY 86

Figure 38

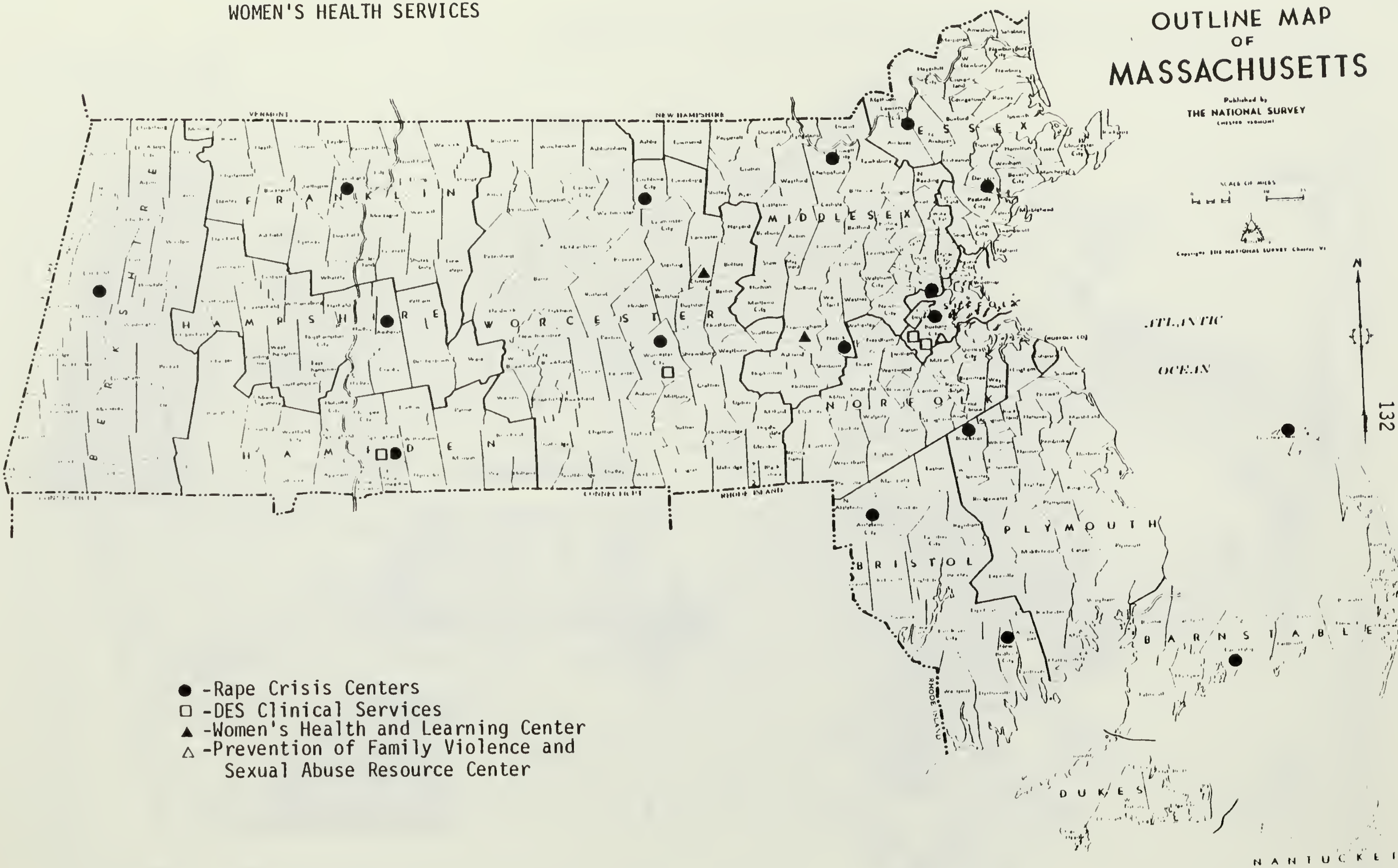
PERINATAL AND PRESCHOOL HEALTH PROGRAM SITES - FY 86


The Commonwealth of Massachusetts
ESSEX
MIDDLESEX
SUFFOLK
NORFOLK
PLYMOUTH
BRISTOL
BARNSTABLE
DUKES
NANTUCKET
WORCESTER
HAMPSHIRE
HAMPDEN
BERKSHIRE
MASSACHUSETTS
MILES
Programs and Sites
▨ ● Community Based High-Risk Infant and Family Support Programs and Service Areas
■ Infant Hearing Diagnostic Centers*
★ NICU Regional Support Programs
▨ ▲ Preschool Health Program

*Serves entire state

Figure 39

WOMEN'S HEALTH SERVICES



(D) DATA COLLECTION ACTIVITIES

1. Current Efforts

Current data collection activities are included in Table 27: "Types of Services to be Provided and Categories or Characteristics of Individuals to be Served".

Previous and ongoing data collection efforts have been of three types:

- Client specific data which range from simple demographics to extensive social and medical histories depending on the program.

  This type of data is usually collected for individuals in programs in which the Division directly provides services.

  More recently, the Division has begun to collect client specific information in individuals served in contracted programs. Although many of the individual contracted programs wish to conduct a detailed analysis of their program population, they lack the resources and experience to develop a data system for this purpose. A joint effort between the Division of Family Health Services and the programs will allow the Division to extensively describe the population being served, evaluate the programs, and provide information to both Division and program administrators that would improve the management of programs and the provision of services. Complementing the development of these data systems will be the implementation of improved security procedures aimed at protecting the confidentiality of the information collected.

- Programmatic data on utilization of services and staffing. These consist mostly of reports provided by contracted programs.

- Data collection activities related to special epidemiologic investigations or program evaluation. These are aimed at improving our understanding of the factors that influence child health, the population in need of services, the type of services needed, and assessing the impact of these services on the population.

a. Client specific data is maintained for program planning, management, and evaluation. Most of this data is maintained on a protected computer environment.

- WIC has a computerized information system that is used to produce and monitor food package vouchers. This system includes demographic and some program and health status data on individuals served by WIC. The program is developing plans to expand their data system to include more health and outcome data and revise the reports generated by the system.

- The Lead Poisoning Program maintains environmental and medical follow-up data and laboratory testing data and source of testing. The testing data has been recently computerized and listings and statistical reports are generated.

- High Risk Infant Identification Program maintains a data base of all infants who have been identified as being at risk for morbidity or developmental problems statewide. Information collected includes identifiers, health status measures, hospital transfer and discharge planning information.

  Information from the system will be used for the development of criteria and guidelines for the monitoring of health status and diagnosis and treatment of the high risk newborn.

  The data base was also designed for the production of monthly reports which will be utilized to ensure proper follow-up care and for annual statistical reports which will be used for the determination of appropriate programs for early childhood intervention.

- The Hearing Aid Program collects extensive demographic, financial and diagnostic data on children receiving hearing aids under this program.

- The Sudden Infant Death Syndrome Program collects extensive demographic, parental reaction, and medical data on program participants.

- Newborn Screening collects data on cases of approximately 30 inborn errors of metabolism.

- The Psychotropic Drug Program maintains data on children receiving psychotropic drugs, for medical reasons, in schools. The system allows the Division of Family Health Services to keep track of the population receiving these drugs. To protect confidentiality, this system does not maintain the child's name and address in computer.

- The DFHS Handicapped Children's Clinic Program maintains an SHC data base, which includes demographic diagnostic, financial, and referral source data on about 12,000 children served by this program during the past five years.

- The Genetics Program clients are also included in the SHC data base.

- Pediatric Nursing Home residents are included in the SHC data base.

- The Developmental Day, Integrated Preschool, Respite, and Pediatric Nursing Home Programs all use a standard document for collecting data on individuals requesting and receiving these services. This includes demographics, referral source, services requested/provided, current use of resources, functional ability, family data, financial capability, medical history, social history and Core Evaluation.

- The Early Intervention Program has developed and implemented an automated data system for 4,500 clients from 44 contracted programs. Each program records identifying, sociodemographic, medical, diagnostic and service information on all clients accepted into active service. The information will be aggregated monthly, quarterly and yearly statewide and by program and DPH region. Three data collection instruments were developed. Mechanisms to allow cross-referencing with other MCH programs were established. Plans for developing a database that will interface with unit rate contracting information are being developed.

- The Case Management (SSI/DC) Program has a sophisticated information system that maintains data on clients. This includes collection of information from the point of client intake through development of service plans and monitoring of the plans. Data maintained includes demographics, listings of child's disabilities, service needs, service providers, funding sources and purchase of service patterns.

- The Hemophilia Program collects a range of data including use of medical services and ability to function.

- The Epilepsy Drug and Rheumatic Fever Program maintains mostly demographic data.

b. Programmatic data collection includes:

- Semi-annual reports from individual contract programs such as Adolescent Health Services, Pregnant and Parenting Adolescents, Preschool Health Services, Developmental Day Programs, Early Intervention Program, Integrated Preschool, Respite Programs, MIC Programs and C&Y Programs.

  These reports include information on utilization, staffing and services provided.

- Handicapped Children Clinic Program produces quarterly clinical attendance reports by clinic type and site on the number of medical encounters, number of admissions and discharges. In addition, an annual report is produced describing the population served and summarizing the data in quarterly clinic attendance reports.

- The Case Management Program produces quarterly reports that examines the quantity of services provided, the characteristics of the client population, and the duration of time between various segments of the service delivery.

- Family Planning Programs utilize a standardized, client specific reporting form that includes such information as age, sex, reason for visit, number of visits, and type of contraceptive used. This data is maintained on a computer system by The John Snow Public Health Group, Inc. and reports are generated on a regular basis.

- The Hearing Aid Program produces an annual report on the number of hearing aids purchased and repaired, as well as describing the population for whom hearing aids are purchased, and the type of aid selected.

- The Psychotropic Drug Program produces an annual report on children who receive psychotropic drugs identified by age, diagnosis, medication, school system, and physician.

- DES (Diethylstilbestrol) Diagnostic Program maintains client data for those women who have utilized DPH certified diagnostic centers. Information collected includes medical findings from the screening examination, sociodemographic data, and amount of DPH reimbursement.

- The Women's Health Program collects data on the Rape and Sexual Abuse Program which includes:

  - A monitoring system for clients of the Rape Crisis Centers funded by DPH. This system provides a data base for the determination of the overall reported incidence of rape, the utilization of medical and legal resources in the community, the sociodemographics of the victim and assailant, and the kinds of consultation provided by the center.

  - A needs assessment for sexual abuse and violence services statewide. This is a survey of 56 Battered Women's Shelters, Rape Crisis Centers and Sexual Abuse Programs, in order to determine the amount and kind of services provided by the programs for regions in the state, the staff and budget of the programs and the barriers to effective functioning of the organization.

The Women's Health Program is also currently developing an evaluation tool for the assessment of the services which are being provided to women in prison.

c. Epidemiologic and Program Evaluation projects include:

- The development of a computerized data base of natality, mortality, demographic, and socioeconomic (i.e. poverty, unemployment, housing) information on pregnant women and children in Massachusetts began in FY'82. The data base was designed to facilitate the development of more comprehensive needs assessments, the comparison of individuals served to the overall population, and the dissemination of information to health planners, health care providers, and child advocacy groups. Each year this data base is updated with the most current information available. One of the products of this data base will be a report on maternal and child health in Massachusetts.

- The Statewide Child Injury Prevention Program has collected a multitude of data in order to determine the magnitude and circumstances surrounding childhood injuries:

  - Injury Surveillance System (ISS) - abstracted hospital medical records for emergency room visits and admissions for a three-year period (9/79 - 8/82). This system provided a data base for understanding the epidemiology of childhood injuries and served as a base for evaluation interventions aimed at prevention. Monitored through the ISS are cases of injuries to 0 - 19 year olds residing in 14 Massachusetts communities, treated and released from an Emergency Room or admitted to a hospital. This data base comprises the only population-based morbidity study on childhood injuries in the country. This has led SCIPP to become a national source for comprehensive information on the incidence of childhood injuries. Efforts are underway to modify and expand the ISS to a statewide data collection system by FFY'87.

  - SCIPP also conducted a Household Pre and Post Intervention Telephone Survey and collected data on injuries from the Massachusetts Health Data Consortium, physician logs, housing inspections for household hazards and the Massachusetts Burn Registry. Based on these data collection efforts, SCIPP has been able to conduct a series of analyses on specific injuries within defined population groups.

- SCIPP's current epidemiological activities include obtaining information from
    - State Vital Records on injury-related mortality
    - Uniform Hospital Discharge Data System
    - a Key Informant survey of physicians, legislators, home health agencies, academicians, police and fire chiefs, community organizations and other health care providers related to attitudes on injuries and accidents
    - an Elementary School Needs Assessment
    - a Survey of Medical Records Departments in acute care hospitals.

- Massachusetts Passenger Safety Program conducts a yearly observational study of child and adult restraint usage and attitudes in Massachusetts. The 1984 study collected 5,000 observations of automobiles to determine the percentage of children and adults restrained, the proper use of restraints, and sociodemographics of the child and driver. Further analysis of this data is currently underway.

  The 1984 study will provide baseline date for the determination of overall seat belt use in the state and for the evaluation of intervention programs designed to affect usage.

- Investigation of High Infant Mortality in Critical Areas of the State. The IMR for Holyoke (13.8) and Haverhill (21.9) far exceeded the state rate in 1983. Birth, death and population data are being analyzed to determine what factors are associated with these high rates so that programs can be developed to address them.

- The Maternal and Infant Care Program computerizes individual non-identifiable data on women in the program in order to better describe the population served by each health center, and determine market shares and success in reducing poor perinatal outcome. This data includes demographics, adequacy of prenatal care, circumstances of delivery, postnatal care, and birth outcome measures.

- The Division conducted a nutrition study to assess how the growth patterns of children in Massachusetts, particularly poor children, compare to established patterns of growth. This study collected sociodemographic information, height, weight, hemoglobin value, hematocrit value, use and change in assistance programs, and nutrition information. Further analysis is being conducted on this data.

- The Massachusetts Adolescent Pregnancy and Parenting Study (MAPPS) in order to better understand the population of adolescents who become parents, to provide appropriate services for them, and to evaluate strategies for reducing future teen pregnancies, has developed and is using a series of instruments aimed at collecting the information needed to meet these objectives. The information includes sociodemographics, prenatal care, birth outcome, maternal health, family support and provider information. The first set of analyses were undertaken in FY '84.

- The Failure to Thrive Program has developed a data system in order to understand the characteristics and needs of the population receiving services, as well as to monitor the amount of services provided and to evaluate outcome measures.

- The Child Fatality Study will collect information from a variety of sources on all children 0-19 years of age who die during calendar year 1985 (Jan. 1, 1985 - Dec. 31, 1985) and who resided in Massachusetts at the time of death. The study will also include a retrospective analysis of all deaths to children 0-19 years of age during a five-year period of calendar years 1980-1984 based exclusively on death certificate data.

2. Future Data Management Efforts

The Division's future data management efforts are aimed at:

a. Assessing the need for MCH & SHC services

- This activity includes refinement of statistical methodologies developed by the Division for determining the number of individuals eligible and in need of MCH services. The development of such methodologies for SHC has begun. Unlike many MCH programs, where there are often no alternative sources of services, many SHC services can be obtained in the private sector. However, the geographic distribution and availability of such services to poor populations often prevents access to all needy individuals.

- The development of an ongoing nutrition surveillance system which will be an offshoot of the 1983 nutrition study, is aimed at monitoring the health status of vulnerable population groups, beginning with young children. Establishment of the system will enable the Office of Nutrition to better identify and tailor services for target groups, develop referral systems, evaluate programs and identify unmet and changing needs for service.

b. Providing information to program administrators that will aid them in improved decision making with respect to service provision.

- The School Health Program staff are developing an information system for monitoring and comparing health related activities of school districts. They also are working on plans for determining the effect of postural screening on the incidence of severe scoliosis in children.

c. Increasing or improving coordination of activities and goals among DFHS programs

- The High Risk Infant Identification System, when fully implemented, will link children with special needs to the Division's Services for Handicapped Children Programs. One of these programs, The Early Intervention Program will in turn make referrals into services provided by other state agencies. The data system that will be developed for the High-Risk Infant Identification System and the EI System will be used for evaluating the referral process.

d. Engaging in collaborative research to investigate issues that would lead to measures that would improve the health of pregnant women and children

- A Prenatal Care Survey in Holyoke is being conducted by the Division and the Valley Opportunity Council. The overall purpose of this collaborative research effort by the Division and community-based organizations is to identify factors that influence prenatal care utilization for women in Holyoke, and to develop a needs assessment instrument for the rest of the state which will contain those items found to be significantly associated with prenatal care utilization.

  Access to prenatal care is a key concern of the Division and a survey is necessary for the identification of sociocultural, structural and behavioral factors associated with inadequate utilization of health care. It will also serve to identify stressors and social supports experienced by women during pregnancy, as well as knowledge of prenatal care protocols and available community resources. The documentation of the barriers, problems and reasons for poor prenatal care utilization will provide useful information for program planning and evaluation for both community agencies and the Division.

Other projects relating to prenatal care include:

- A WIC program evaluation of interventions which seek to identify, and then to positively influence, a woman's knowledge, attitudes and sources of support for breastfeeding. Identification of interventions that increase the likelihood that a woman will breastfeed and continue to nurse as long as intended will be used to develop a statewide breastfeeding policy for WIC and other MCH programs.
- An evaluation of smoking and birth outcomes among pregnant women in MIC programs, using perinatal log data sets.

III. SEC. 505: DESCRIPTION OF INTENDED EXPENDITURES & STATEMENT OF ASSURANCES (2) STATEMENT OF ASSURANCES

The Commonwealth of Massachusetts assures the Secretary of the Department of Health and Human Services that the provisions of Section 505 of th Title V - Maternal and Child Health Services Block Grant will be carried out. Each of the provisions of Section 505, with reference to the paragraphs of the legislation, is addressed in the following section:

505 (2) (A) : Fair method for allocating funds, guidelines, and quality assurances

505 (2) (B) : Restriction of funds to purpose of Title V and prohibitions against discrimination

505 (2) (C) (i) : Expenditure of "substantial" proportion of Title V funds for services and special consideration for special projects

505 (2) (D) : State charges/financial eligibility

505 (2) (E) (iii) : Interagency coordination

505 : Public comment

505 (2)(A) FAIR ALLOCATION METHOD

The Commonwealth of Massachusetts will provide a fair method for allocating funds allotted under this title among such individuals, areas, and localities identified under paragraph (1) (A) as needing maternal and child health services.

During the first two years of the Block Grant, FY 1982 and 1983, the Division maintained historical funding patterns to a large degree, making proportional cuts in consolidated health programs when its appropriations were reduced, and restoring some of these funds as appropriations were increased. At the same time, it developed more sophisticated methods for ensuring fair allocation in the future. Methodologies for conducting systematic needs assessments were developed and utilized for the WIC, Primary Care, Lead Paint Poisoning Prevention and Early Intervention Programs in order to target funds to high need areas of the state through open, competitive bidding processes. These needs assessments have been updated periodically and utilized to award contracts on regular three-year cycles, as well as when supplemental or expansion state or federal funds have been awarded.

In other program areas where systematic needs assessments have not been conducted, the Division attempted to ensure fair allocation by setting funding goals that would more equitably distribute funds across the state. For example, the goal in the FY '84 Adolescent Health and Adolescent Pregnancy Request For Proposal was to fund at least one of each program in each of the state's four public health regions, and in the metropolitan Boston area.

The Division anticipates further refinement and application of needs assessment tools that will ensure fair allocation of funds within program areas and which will assist in setting priorities for funding across program areas. An evaluation of the SHC clinic system which includes assessment of need and resources is in process. Additionally, with the assistance of the FHS Advisory Council, and through other avenues for public participation, the Division is endeavoring to more clearly define priorities which will guide distribution of funds across program areas.

In addition to the previous state maps which compare need and available MCH programs, the following table also provides information on allocation of resources among and within program areas. Table 28 lists contracted programs for FFY 1986 by Health Service Area (HSA). Table 29 provides some information on allocation of funds to programmatic units within the Division of Family Health Services.

In summary, while retaining its commitment to overall goals of the Maternal and Child Health Block Grant, the Division anticipates moving further from historical and proportional methods for determining allocation of funds to methods which rely on systematic needs assessments to guide allocation of funds within program areas, and on improved policy formulation to guide allocation across program areas.

TABLE 28
FY 1986 PURCHASE OF SERVICE CONTRACTS BY HEALTH SERVICES AREAS[1]

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT[2]
HSA I				
1.	Chicopee V.N.A.	Chicopee	High Risk Infant	$ 25,887
2.	Holyoke V.N.A.	Holyoke	High Risk Infant	40,205
3.	Mercy Hospital	Springfield	High Risk Infant	24,081
4.	V.N.H.S. Franklin County	Greenfield	High Risk Infant	27,986
5.	Berkshire Community Action Council	Pittsfield	WIC	159,407
6.	Hampshire County Home Care Services, Inc.	Northampton	WIC	47,586
7.	Human Resource Center for Rural Communities, Inc.	Athol	WIC	47,358
8.	Valley Opportunity Council, Inc.	Chicopee	WIC	192,939
9.	Valley Opportunity Council, Inc.	Chicopee	WIC	77,358
10.	V.N.H.S. Franklin County	Greenfield	WIC	114,593
11.	Family Planning Council of Western MA	Northampton	WIC	180,495
12.	The Providence Hospital, Inc.	Holyoke	Prenatal (MIC)	139,000
13.	Baystate Medical Center	Springfield	Prenatal (MIC)	137,758
14.	Children's Health Program	Great Barrington	Pediatric (C&Y)	111,946
15.	Holyoke Health Center	Holyoke	Pediatric (C&Y)	86,619
16.	Human Resource Center for Rural Communities, Inc.	Athol	Pediatric (C&Y)	28,163
17.	U.C.P of Western MA	Springfield	Early Intervention	271,452
18.	U.C.P of Western MA	Springfield	PL 89-313 (EI)	128,880
19.	Children's Health Program	Great Barrington	Early Intervention	41,856
20.	Children's Health Program	Great Barrington	PL 89-313 (EI)	24,480
21.	Pediatric Development Center	Pittsfield	Early Intervention	153,911
22.	Pediatric Development Center	Great Barrington	PL 89-313 (EI)	52,560
23.	N. Berkshire Mental Health Assoc.	North Adams	Early Intervention	109,602
24.	N. Berkshire Mental Health Assoc.	North Adams	PL 89-313 (EI)	37,440

---

[1] Includes all state and federally funded services administered by the Division of Family Health Services.

[2] Projected 12-month equivalent of FY'86 contracts as of October, 1985. For some programs, agency or amount may change as Requests for Proposals (RFPs) are issued or contracts are renewed.

FY 1986 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
25.	Franklin/Hampshire Comm. Ment. Health	Northampton	Early Intervention	$ 221,337
26.	Franklin/Hampshire Comm. Ment. Health	Northampton	PL 89-313 (EI)	61,920
27.	Pioneer Development Center	Chicopee	Early Intervention	154,718
28.	Pioneer Development Center	Chicopee	PL 89-313 (EI)	51,840
29.	Douglas A. Thom Clinic	Westfield	Early Intervention	166,794
30.	Douglas A. Thom Clinic (Infant Toddler Intervention Program)	Westfield	PL 89-313 (EI)	52,560
31.	Douglas A. Thom Clinic (Eastern Mountain Center)	Springfield	Outreach & Training	53,264
32.	Douglas A. Thom Clinic (Eastern Mountain Center)	Springfield	Integrated Preschool	110,500
33.	Preschool Enrichment Team	Holyoke	Preschool Health	178,464
34.	Holyoke V.N.A., Inc.	Holyoke	Lead Poisoning Prevention	10,019
35.	Housing Allowance Project, Inc.	Springfield	Lead Poisoning Prevention	17,400
36.	V.N.A. of Springfield, Inc.	Springfield	Lead Poisoning Prevention	56,732
37.	C.A.N. - Be, Inc.	Pittsfield	PPAP	103,833
38.	Family Planning Council of Western MA	Northampton	PPAP	102,936
39.	Baystate Medical Center	Springfield	Failure to Thrive	78,000
40.	Baystate Medical Center	Springfield	NICU	46,800
41.	Rape Crisis Center of Berkshire County, Inc.	Pittsfield	Rape Crisis	34,320
42.	N.E. Learning Center for Women in Transition, Inc. (NELCWIT)	Greenfield	Rape Crisis	26,000
43.	Hotline to End Rape and Abuse, Inc. (HERA)	Springfield	Rape Crisis	41,600
44.	UMass - Everywoman's Center	Amherst	Rape Crisis	26,000
			TOTAL HSA I	$3,856,599
HSA II				
1.	Pernet Family Health Services	Worcester	High Risk Infant	$ 83,959
2.	Harrington Memorial Hospital	Southbridge	WIC	178,900
3.	Pro-Health	Fitchburg	WIC	119,800
4.	Family Health & Social Service Center	Worcester	WIC	167,000
5.	U. of Mass. Medical Center	Worcester	Pediatric (C&Y)	60,432

FY 1986 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
6.	Leominster Hospital	Leominster	Prenatal (MIC)	41,600
7.	Family Health & Social Service Center	Worcester	Prenatal (MIC) & Pedi. (C&Y)	85,092
8.	Herbert Lipton Comm. Ment. Health Ctr.	Fitchburg	Early Intervention	213,773
9.	Herbert Lipton Comm. Ment. Health Ctr.	Fitchburg	PL 89-313 (EI)	29,520
10.	U. of Mass. Medical Center	Worcester	Early Intervention	207,937
11.	U. of Mass. Medical Center	Worcester	PL 89-313 (EI)	72,720
12.	North Central Human Services	Gardner	Early Intervention	52,474
13.	North Central Human Services	Gardner	PL 89-313 (EI)	20,160
14.	Harrington Memorial Hospital	Southbridge	Early Intervention	82,648
15.	Harrington Memorial Hospital	Southbridge	PL 89-313 (EI)	32,400
16.	U. of Mass. Medical Ctr. Group Practice	Worcester	SHC Clinics/Doctors' Services	40,000
17.	City of Worcester	Worcester	Lead Poisoning Prevention	54,358
18.	Family Planning of Central MA	Worcester	PPAP	247,767
19.	Health Information Referral Service	Marlborough	PPAP	60,784
20.	University of Massachusetts	Worcester	Failure to Thrive	61,651
21.	Worcester Memorial Hospital, Inc.	Worcester	Neonatal Int. Care Reg. Dev.	47,195
22.	U. of Mass. Medical Center	Worcester	Training & Outreach	98,800
23.	Rape Crisis Program of Worcester, Inc.	Worcester	Rape Crisis	41,600
24.	LUK, Crisis Center, Inc.	Fitchburg	Rape Crisis	15,600
			TOTAL HSA II	$2,116,170

HSA III/VI

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
1.	V.N.A. of North Shore, Inc.	Danvers	High Risk Infant	$ 55,972
2.	Community Action, Inc.	Haverhill	WIC	146,600
3.	Greater Lawrence Community Action	Lawrence	WIC	120,800
4.	Community Team Work, Inc.	Lowell	WIC	135,200
5.	Lynn Community Health, Inc.	Lynn	WIC	78,000
6.	Lynn Community Health, Inc.	Lynn	WIC	169,900
7.	The Malden Hospital	Malden	WIC	90,600
8.	Lowell General Hospital	Lowell	Pediatrics (C&Y)	111,945
9.	Lynn Community Health, Inc.	Lynn	Prenatal (MIC) & Pedi. (C&Y)	162,934
10.	Greater Lawrence Family Health Center	Lawrence	Pediatrics (C&Y)	83,959
11.	Greater Lawrence Family Health Center	Lawrence	Prenatal (MIC)	57,200
12.	U.C.P. of North Shore	Lynn	Early Intervention	196,341

FY 1986 PURCHASE OF SERVICE CONTRACTS BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
13.	U.C.P. of North Shore	Lynn	PL 89-313 (EI)	70,560
14.	N.E. Memorial Hospital	Stoneham	Early Intervention	117,337
15.	N.E. Memorial Hospital	Stoneham	PL 89-313 (EI)	47,520
16.	Haverhill/Newburyport Human Services	Haverhill	Early Intervention	135,726
17.	Haverhill/Newburyport Human Services	Haverhill	PL 89-313 (EI)	28,080
18.	U.C.P. of North Shore	Danvers-Salem	Early Intervention	63,020
19.	U.C.P. of North Shore	Danvers-Salem	PL 89-313 (EI)	10,080
20.	North Shore Children's Hospital	Cape Ann	Early Intervention	57,030
21.	North Shore Children's Hospital	Cape Ann	PL 89-313 (EI)	11,520
22.	Tri-City Community Mental Health & Retardation Association	Malden	Early Intervention	152,938
23.	Tri-City Community Mental Health & Retardation Association	Malden	PL 89-313 (EI)	42,480
24.	Professional Center for Handicapped Children, Inc.	Andover	Early Intervention	180,131
25.	Professional Center for Handicapped Children, Inc.	Andover	PL 89-313 (EI)	29,520
26.	Douglas A. Thom Clinic (Anne Sullivan Center)	Tewksbury	Early Intervention	263,749
27.	Douglas A. Thom Clinic (Anne Sullivan Center)	Tewksbury	PL 89-313 (EI)	69,840
28.	Professional Center for Handicapped Children, Inc.	Andover	Outreach & Training	79,896
29.	Douglas A. Thom Clinic (Anne Sullivan Center)	Tewksbury	Integrated Preschool	48,665
30.	Douglas A. Thom Clinic (Anne Sullivan Center)	Tewksbury	Developmental Day	120,681
31.	Greater Lawrence Community Action	Lawrence	Lead Poisoning Prevention	279,093
32.	North Shore Children's Hospital	Salem	Lead Poisoning Prevention	55,633
33.	St. John's Hospital	Lowell	PPAP	81,120
34.	Healthworks, A Family Life Resource Ctr.	Lowell	PPAP	81,120
35.	Project RAP, Inc. URSA	Beverly	Rape Crisis	40,880
36.	Greater Lawrence Mental Health Center, Inc.	Lawrence	Rape Crisis	30,000
37.	Rape Crisis Services of Greater Lowell, Inc.	Lowell	Rape Crisis	35,448

FY 1986 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
38.	North Shore Community Health Center, Inc.	Peabody	Prenatal (MIC)	28,600
			TOTAL HSA III/VI	$3,570,118
	HSA IV			
1.	Federated Dorchester Neighborhood	Dorchester	High Risk Infant	$ 63,440
2.	Trustees of Health & Hospitals	Boston	High Risk Infant	87,809
3.	Trustees of Health & Hospitals	Boston	Sudden Infant Death Syndrome	145,529
4.	Brigham & Women's Hospital	Boston	WIC	149,600
5.	Cambridge Hospital	Cambridge	WIC	142,600
6.	Harvard St. Neighborhood Health Center	Dorchester	WIC	210,691
7.	Mass. General Hospital (Bunker Hill)	Boston	WIC	147,600
8.	St. Elizabeth's Hospital	Brighton	WIC	120,304
9.	Somerville Hospital	Somerville	WIC	142,100
10.	South End Community Health Center	Boston	WIC	140,999
11.	South Middlesex Opportunity Council, Inc.	Framingham	WIC	56,334
12.	Upham's Corner Health Committee	Dorchester	WIC	207,400
13.	Whittier Street Health Center Comm.	Roxbury	WIC	176,377
14.	Quincy City Hospital	Quincy	WIC	122,404
15.	Neponset Health Center	Dorchester	WIC	77,502
16.	South Boston Community Health Ctr, Inc.	Boston	WIC	43,848
17.	Affiliated Neighborhood Health Centers	Boston	Prenatal (MIC)	41,600
18.	South Cove Community Health Center	Boston	Prenatal (MIC) & Pedi. (C&Y)	167,918
19.	Brigham & Women's Hosp. (Brookside Pk.)	Boston	Prenatal (MIC) & Pedi. (C&Y)	123,140
20.	Mass. General Hospital (Bunker Hill)	Boston	Pediatric (C&Y)	95,819
21.	Mass. General Hospital (Chelsea)	Chelsea	Pediatric (C&Y)	144,864
22.	Roxbury Comprehensive Comm. Health Ctr.	Roxbury	Prenatal (MIC)	88,055
23.	Jos. M. Smith Community Health Center	Brighton	Pedi. (C&Y)	104,271
24.	St. Margaret's Hospital	Dorchester	Prenatal (MIC)	83,959
25.	East Boston Neighborhood Health Center	East Boston	Prenatal (MIC) & Pedi. (C&Y)	179,395
26.	Harvard St. Neighborhood Health Center	Dorchester	Prenatal (MIC)	167,918
27.	Harvard St. Neighborhood Health Center	Dorchester	Pediatric (C&Y)	167,919
28.	Whittier St. Health Center	Boston	Prenatal (MIC) & Pedi. (C&Y)	132,856

FY 1986 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
29.	Upham's Corner Health Center	Boston	Prenatal (MIC)	80,044
30.	Children's Hospital Corp. (Martha Eliot)	Boston	Prenatal (MIC) & Pedi. (C&Y)	335,836
31.	Somerville Hospital	Somerville	Prenatal (MIC)	112,682
32.	St. Elizabeth's Hospital	Brighton	Prenatal (MIC)	55,972
33.	Minuteman A.R.C.	Concord	Early Intervention	156,389
34.	Minuteman A.R.C.	Concord	PL 89-313 (EI)	59,720
35.	Kennedy Center for Handicapped Children	Foxboro	Early Intervention	98,827
36.	Kennedy Center for Handicapped Children	Foxboro	PL 89-313 (EI)	33,120
37.	Kennedy Center for Handicapped Children	New Bedford	Early Intervention	139,615
38.	Kennedy Center for Handicapped Children	New Bedford	PL 89-313 (EI)	37,440
39.	Center for the Development of Human Services, Inc.	Milford	Early Intervention	171,733
40.	Center for the Development of Human Services, Inc.	Milford	PL 89-313 (EI)	41,040
41.	Center for the Development of Human Services, Inc.	Framingham	Early Intervention	121,379
42.	Center for the Development of Human Services, Inc.	Framingham	PL 89-313 (EI)	32,400
43.	Kennedy Center for Handicapped Children	Hanson	Early Intervention	118,277
44.	Kennedy Center for Handicapped Children	Hanson	PL 89-313 (EI)	36,720
45.	Bay Cove Human Services	Boston	Early Intervention	146,117
46.	Bay Cove Human Services	Boston	PL 89-313 (EI)	31,680
47.	Coastal Community Counseling Center	Braintree	Early Intervention	38,863
48.	Coastal Community Counseling Center	Braintree	PL 89-313 (EI)	42,480
49.	Dorchester/Mattapan Community Mental Health Center	Dorchester	Early Intervention	91,001
50.	Dorchester/Mattapan Community Mental Health Center	Dorchester	PL 89-313 (EI)	29,520
51.	Roxbury Children's Service, Inc.	Dorchester	Early Intervention	132,980
52.	Roxbury Children's Service, Inc.	Dorchester	PL 89-313 (EI)	33,120
53.	Mental Health Association Marlboro Westboro Area	Marlborough	Early Intervention	61,454
54.	Mental Health Association Marlboro Westboro Area	Marlborough	PL 89-313 (EI)	24,235
55.	Mental Health & Retardation Center of Cambridge & Somerville	Cambridge	Early Intervention	115,665
56.	Mental Health & Retardation Center of Cambridge & Somerville	Cambridge	PL 89-313 (EI)	76,320

FY 1986 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
57.	Newton-Needham Mental Health Assn.	Newton	Early Intervention	92,086
58.	Newton-Needham Mental Health Assn.	Newton	PL 89-313 (EI)	54,000
59.	North Suffolk Mental Health Assn.	Chelsea	Early Intervention	115,347
60.	North Suffolk Mental Health Assn.	Boston	PL 89-313 (EI)	42,480
61.	South Norfolk A.R.C.	Norwood	Early Intervention	133,701
62.	South Norfolk A.R.C.	Norwood	PL 89-313 (EI)	36,720
63.	South Shore Mental Health Center	Quincy	Early Intervention	72,918
64.	South Shore Mental Health Center	Quincy	PL 89-313 (EI)	42,480
65.	Southwest Boston Community Services	Roslindale	Early Intervention	84,780
66.	Southwest Boston Community Services	Roslindale	PL 89-313 (EI)	30,240
67.	The Waltham/Weston Hospital (Metro-Beaverbrook)	Waltham	Early Intervention	86,799
68.	The Waltham/Weston Hospital (Metro-Beaverbrook)	Waltham	PL 89-313 (EI)	37,857
69.	The Waltham/Weston Hospital	Waltham	Early Intervention	128,510
70.	The Waltham/Weston Hospital	Waltham	PL 89-313 (EI)	23,460
71.	Vinfen Corporation	Boston	Early Intervention	130,534
72.	Vinfen Corporation	Boston	PL 89-313 (EI)	30,960
73.	Enable Inc.	Canton	Developmental Day	88,308
74.	Enable Inc.	Canton	Outreach & Training	126,715
75.	Enable Inc.	Canton	INtegrated Preschool	44,408
76.	Adaptive Environments, Inc.	Boston	SHC Clinics/Adaptive Housing	100,000
77.	Trustees of Health & Hospitals	Boston	Lead Poisoning Prevention	431,184
78.	The Children's Hospital Corporation	Boston	Risk Information Services	237,078
79.	Trustees of Health & Hospitals	Boston	PPAP	174,872
80.	St. Margaret's Hospital	Dorchester	PPAP	162,240
81.	Brigham & Women's Hospital	Boston	PPAP	172,210
82.	Children's Hospital Corporation	Boston	PPAP	32,448
83.	Children's Hospital Corporation (Martha Eliot Center)	Boston	PPAP	52,262
84.	Trustees of Health & Hospitals	Boston	Failure to Thrive	182,000
85.	Children's Hospital Corporation	Boston	Failure to Thrive	94,349
86.	Trustees of Health & Hospitals	Boston	Neonatal Int. Care Reg. Dev.	35,396
87.	The General Hospital Corp.	Boston	Neonatal Int. Care Reg. Dev.	29,500
88.	Boston Hospital for Women	Boston	Neonatal Int. Care Reg. Dev.	82,597
89.	St. Margaret's Hospital for Women	Boston	Neonatal Int. Care Reg. Dev.	41,300

FY 1986 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
90.	N.E. Medical Center Hospitals, Inc.	Boston	Neonatal Int. Care Reg. Dev.	36,812
91.	National Birth Defects Center, Inc.	Brighton	Risk Information Services	60,320
92.	Boston YWCA-West Suburban YWCA	Boston	Rape Crisis	29,634
93.	Women's Education Center, Inc.	Cambridge	Rape Crisis	30,000
94.	Roxbury Multi-Service Center	Roxbury	Rape Crisis	27,750
95.	Center for Study of Public Policy	Brighton	Occupational Health Education	18,750
			TOTAL HSA IV	$9,419,885
HSA V				
1.	Brockton V.N.A.	Brockton	High Risk Infants	$ 83,560
2.	Brockton Area Multi-Services	Brockton	WIC	152,021
3.	Citizens for Citizens	Fall River	WIC	149,765
4.	Fall River Comm. Dev. Service Ctr.	Fall River	WIC	168,900
5.	Health Care of Southeastern Mass., Inc.	Abington	WIC	134,600
6.	Health Care of Southeastern Mass., Inc.	Abington	WIC	57,000
7.	Greater New Bedford Comm. Health Center	New Bedford	WIC	183,900
8.	Health Care of Southeastern Mass., Inc.	Hyannis	Prenatal (MIC)	113,372
9.	Fall River Comm. Dev. Service Ctr.	Fall River	Prenatal (MIC)	76,772
10.	Greater New Bedford Comm. Health Center	New Bedford	Prenatal (MIC)	55,972
11.	Brockton Hospital	Brockton	Pedi. (C&Y)	146,236
12.	Cape Cod Child Development Program	Hyannis	Early Intervention	203,839
13.	Cape Cod Child Development Program	Hyannis	PL 89-313 (EI)	35,280
14.	Brockton Area Multi-Services	E. Bridgewater	Early Intervention	173,629
15.	Brockton Area Multi-Services	E. Bridgewater	PL 89-313 (EI)	59,760
16.	People, Inc.	Fall River	Early Intervention	117,964
17.	People, Inc.	Fall River	PL 89-313 (EI)	38,880
18.	Taunton Area Assoc. for Human Services	Taunton	Early Intervention	161,403
19.	Taunton Area Assoc. for Human Services	Taunton	PL 89-313 (EI)	54,000
20.	Cape Cod Child Development Program	Hyannis	Integrated Preschool	96,453
21.	Barnstable County Health Department	Barnstable	Handicapped Children's Clinic	138,605
22.	Health Care of Southeastern Mass., Inc.	Abington	PPAP	97,755
23.	Southeastern Mass. University	Dartmouth	Lead Poisoning Prevention	120,145
24.	New Hope, Inc.	Attleboro	Rape Crisis	26,000
25.	New Bedford Women's Center	New Bedford	Rape Crisis	41,600

FY 1986 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
26.	Center for Individual and Family Services of Cape Cod	Hyannis	Rape Crisis	31,200
27.	Health Care of Southeastern Mass., Inc.	Abington	Rape Crisis	31,200
			TOTAL HSA V	$2,749,811
	Blanket Contracts			
1.	Camperships	various towns		$ 82,000
2.	V.N.A./Home Health Aides	various towns		128,800
3.	Homemaker Services	various towns		10,600
4.	Interim Services Funds (SSI)	various towns		20,800
5.	Interim Services Funds (Lead)	various towns		13,000
6.	Transportation Services (EI)	various towns		1,375,000
			TOTAL BLANKETS	$1,630,200
			TOTAL CONTRACTS	$23,342,783

TABLE 29
DIVISION OF FAMILY HEALTH SERVICES
FFY'86 ESTIMATED UNIT BUDGETS*

Maternal and Child Health	State	Federal	Total
Women, Infants & Children	4,264,307	27,813,559[1]	32,077,866
Primary Health Care	3,139,302	3,308,743	6,448,045
Perinatal & Genetics	1,891,956	265,949	2,157,905
Preschool & School Health	1,254,733	1,388,333[2]	2,643,066
Women's Health	730,738	225,710[3]	956,448
	11,281,036	33,002,294	44,283,330
Office of Nutrition	140,141	- 0 -	140,141
Services for Handicapped Children			
Early Childhood Development	10,047,143	2,046,397[4]	12,093,540
Clinical Services	1,637,573	2,047,198	3,684,771
Community Services	392,866	257,383	650,249
Case Management Services	- 0 -	756,653	756,653
	12,077,582	5,107,631	17,185,213
TOTAL DIVISION	23,498,759	38,109,925[5]	61,608,684

---

* Administrative costs are proportionately attributed to each budget unit, and therefore Unit totals exceed actual appropriated or budgeted amounts.

[1] Funds derived from the U.S. Department of Agriculture; estimated FFY'86 appropriation of $26,177,182.

[2] Includes funds for the Statewide Childhood Injury Prevention Program from a MCH SPRANS grant ($458,000) and Department of Transportation funds ($187,996) administered through the Governor's Highway Safety Bureau.

[3] Funded by the Preventive Health and Health Services Block Grant at $182,431 for FFY'86.

[4] Funding of $1,926,000 for Early Intervention Programs derived from P.L. 89-313.

[5] MCH Block Grant estimated FFY'86 appropriation of $9,178,317 accounts for remaining federal funding for the Division.

505 (2)(A)

GUIDELINES AND QUALITY ASSURANCE

The Commonwealth of Massachusetts will identify and apply guidelines for appropriate referral and follow-up with respect to health care assessments and services financially assisted under this Title and methods for assuring quality assessments and services.

The Division of Family Health Services has long been in the forefront of the development of guidelines and standards for the care of mothers, infants, and handicapped children. The Services for Handicapped Children clinics and other related programs operate under written guidelines prepared by the Department which address such issues as eligibility, provider qualifications, service components, responsibilities of team members, confidentiality, and record reviews. A workplan for a more comprehensive Quality Assurance Program began implementation in the SHC clinic system in FY '85.

All contracted programs offered under this Title are expected to be in compliance with any guidelines and standards recommended by relevant national organizations such as the American Academy of Pediatrics (AAP), American College of Obstetrics and Gynecology (ACOG), Association of State and Territorial Health Officers (ASTHO) and the American Public Health Association (APHA). All vendors must be fully licensed or approved under Medicaid regulations and must be in compliance with any other appropriate state licensing regulations (e.g. day care, special education, etc.). All Title V, and other federal guidelines (such as Title X Family Planning) are monitored as well.

Additionally, standards specific to each program model are included in Requests for Proposals (RFP's). Applicants are judged on their ability to comply with these standards, and those awarded contracts are monitored for continued compliance. Detailed standards were developed and incorporated into RFP's for the following MCH consolidated programs during FY '82 and FY '83: Maternal and Infant Care, Children and Youth, Lead Poisoning Prevention, and Adolescent Health and Adolescent Pregnancy.

Quality assurance requirements for both internal and external quality control mechanisms are built into state and federal contracts.

The Division has also been the lead agency in the development and promulgation of updated hospital standards for maternity and pediatric care which provide assurance that all children and mothers hospitalized in the state receive the highest quality care, referral, and discharge planning. The Division participated in writing licensure regulations for birthing centers.

505 (2)(B)

RESTRICTIONS OF FUNDS TO PURPOSE OF TITLE V AND PROHIBITION AGAINST DISCRIMINATION

The Commonwealth assures that the funds allocated to it will only be used to carry out the purposes of this Title or to continue activities previously conducted under the consolidated health programs described in Section 502 (B) (1).

The Commonwealth assures that prohibitions against discrimination on the basis of age, handicap, sex, race, color or national origin, and religion consistent with Section 508 of this Title, shall be observed by all programs receiving support.

505 (2)(C)(i)

EXPENDITURE OF SUBSTANTIAL PROPORTION FOR SERVICES AND SPECIAL CONSIDERATION FOR "SPECIAL PROJECTS"

The Commonwealth assures that a substantial proportion of the sums expended under this Title will be used for the provision of health services to mothers and children, with special consideration given where appropriate to the continuation of special projects previously funded under Title V.

Administrative costs for the Division of Family Health Services in FY '86 will be approximately 6% of total state and federal expenditures (or approximately 13% if the WIC budget is not included in the computation). Special consideration has been given to the continuation of those categories of programs previously funded under Title V as the Program of Projects, e.g. Children and Youth Projects, Maternal and Infant Care Projects, and Neonatal Intensive Care Follow-up Projects. Additional state and federal resources have been provided to expand these activities, particularly prenatal care through MIC projects and NICU follow-up.

505 (2)(C)(ii)

EXPENDITURE OF REASONABLE PROPORTION OF FUNDS FOR PURPOSES OF ACCESS, PREVENTION, AND SSI-DCP

The Commonwealth assures that a "reasonable" proportion of funds will be expended to achieve those purposes of the MCH Block Grant specified in Section 501 (A) paragraphs (1) to (3), for access, prevention, and the SSI-DCP Programs.

Virtually all of the MCH programs have accesss and prevention objectives including those services which are primarily curative in nature. The SSI-DCP, or Case Management Services Unit, continues to be funded to address the needs of SSI recipients as well as other handicapped children.

505 (2)(D)

STATE CHARGES/FINANCIAL ELIGIBILITY

The Commonwealth of Massachusetts assures that any charges imposed for the provision of health services made under this title 1) are pursuant to a public schedule of charges; 2) are not imposed for services to low income mothers and children; and 3) are adjusted for the income, resources, and family size of the individual of family provided the services.

Requirements to this effect were promulgated in 1981 under State Regulations for Determination of Financial Eligibility for Certain Programs Administered by the Division of Family Health Services. (105 CMR 930.000).

Programs provided under contract with the Division either provide services free of charge or on a sliding fee scale basis.

505 (2)(E)

INTERAGENCY COORDINATION

The Commonwealth assures that the Maternal and Child Health Services program will participate in coordination of activities with EPSDT under Title XIX to ensure that such programs are carried out without duplication of effort.

A collective working relationship and liaison working group already exist between DFHS and the state EPSDT program. An updated interagency agreement was signed during FY '83. Recent changes in EPSDT's provider participation and reimbursement mechanisms have necessitated adaptations (and, we hope, increased participation) for our contracted primary care projects and the SSI-DC program.

Additionally, through an Executive Office of Human Services' Child Health Work Group, all human service agencies, including DFHS, are working with Project Good Health (EPSDT) to increase participation. The Department of Public Welfare's 1984 report, "Increasing Enrollment in Project Good Health," contained a number of recommendations addressing DFHS programs and DFHS will work with Project Good Health to implement these recommendations.

505 (2)(E)(ii) The Commonwealth will participate in the arrangement and carrying out of coordination agreements described in section 502 (A) (ii) relating to coordination of care and services available under this Title and Title XIX.

The Division intends to continue to work with the state Medicaid agency to assure maximum reimbursement from Medicaid for eligible clients receiving services under DFHS programs, and to assure DFHS program compliance with Medicaid rules and regulations. Numerous examples of these activities are described throughout this document, and include recent initiation of Medicaid reimbursement for Early Intervention Services, collaborative efforts to increase physician participation in Medicaid and to improve access to primary health care services, and development of a state-funded program to pay for maternity care of uninsured pregnant women.

505 (2)(E)(iii) The Division will participate in the coordination of activities within the Commonwealth with programs carried out under this Title and related Federal grant programs including supplemental food programs for mothers, infants, and children, related education programs, and other health, developmental disability, and family planning programs.

a. The Division directly administers the statewide WIC program, which is fully integrated structurally as an operational unit of the Division.

b. Along with other state human services agencies within the Commonwealth, the Department of Public Health has sign-off power for regulations regarding special education pursuant to P.L. 94-142 (and corresponding state legislation). It also participates in regional and central Interdepartmental Teams which negotiate services and interagency agreements for hard-to-place multiply handicapped and special needs children.

c. The Departments of Public Health and Education have a longstanding joint sign-off and collaborative relationship as specified in regulations for the preventive child health services of school health assessments and immunizations. Similar relationships exist with the Office for Children, which licenses day care centers, and private residential programs. The Department is also working collaboratively with the Department of Education to develop a comprehensive plan for pre-school services.

d. Department staff serve on regional coordinating groups for Title X and Title XX family planning grants, and offer technical assistance and monitoring services.

e. Similar formal and informal working relationships exist and are intended to continue with developmental disabilities, Preventive Health Services Block Grant, community health centers, Health Service Agencies (HSAs), Area Health Education Centers, and other Federal programs. The Division now administers the Rape Crisis services funded through the Preventive Health Services Block Grant. The Division's work with the Massachusetts Rehabilitation Commission (MRC) includes a Task Force on Social Security Administration Disability Program and the MRC Disability Coalition. In response to the recommendations of the Task Force on Prevention of Low Birthweight and Infant Mortality, DFHS will be working with the state Executive Office of Human Services to strengthen regional HSA planning and monitoring of MCH needs and services.

f. The participation of representatives from seven other state agencies that serve children, families, and the disabled as ex-officio members of the Family Health Services Advisory Council allows for information sharing and coordination at the planning stages. These agencies include: Project Good Health (EPSDT), Department of Public Welfare; Developmental Disabilities Council; Office for Children; Department of Youth Services; Department of Social Services; Child-Adolescent Services; Department of Mental Health; and Department of Education.

g. The Division participates in a State Executive Office of Human Services (EOHS) interagency Child Health Work Group designed to identify and develop strategies to address child and adolescent health problems and services that require multiple agency resources. Other EOHS groups in which the Division participates include Transitional Planning for Individuals Over 22, and Services for Head Injured and Multiply Handicapped (Pediatric Nursing Homes).

h. In FFY'86, re-establishment of the Massachussets Nutrition Board will provide another vehicle for interagency collaboration. Charged with advising the state on nutrition needs, problems and services, the Board is comprised of 9 gubernatorial appointees and representatives from the following state agencies: Executive Office of Human Services, Department of Food and Agriculture, Office for Children, Department of Mental Health, Department of Public Welfare, Executive Office of Consumer Affairs, Department of Education, and Executive Office of Elder Affairs.

i. A large part of the work of the Women's Health Unit is collaborative in nature. The Unit works with the Governor's Anti-Crime Council in the areas of rape and sexual assault prevention and women in prison. Both the Departments of Public Health and Social Services collaborate on women's health issues, especially in the areas of prevention of sexual abuse and family violence, and the women in prison program. The Women in the Workplace Conference Planning Committee involves the Executive Office of Labor, the Equal Opportunity Employment Administration and the Governor's Office. The Women's Health Program also participates in interagency activities relating to the particular needs and concerns of women of color.

505 PUBLIC COMMENT

The Commonwealth assures that the Description of Intended Expenditures and Statement of Assurances will be made public within the Commonwealth in such a manner as to facilitate comment from any person (including any Medical or other public agency) during its development and remain available for public comment after its transmittal. In addition, the Description and Statement shall be revised throughout the year as may be necessary to reflect substantial changes in any element of such description or statement, and any revision will be made public.

As stated in the Family Health Services Advisory Council Charter, the Council has responsibility for: Reviewing, commenting on, and making recommendations regarding this document prior or its transmittal; soliciting input and recommendations on the document from organizations and agencies of which they are members; and providing ongoing advice throughout the year on the need to revise the document.

Additionally, although not required, public hearings are held in order to solicit comments on the draft application. Notices regarding the hearings and the availability of the draft application are publicized in advance through agency newsletters and special mailings. The document is available for review throughout the state at regional health offices and Health Systems Agencies.

IV. Section 506: REPORTS AND AUDITS

506 (a) REPORTS ON ACTIVITIES AND EXPENDITURES UNDER THIS TITLE

The Commonwealth of Massachusetts will prepare and submit such reports as required by the Secretary of Human Services in order to provide accurate project descriptions, provide a complete record of funds spent and progress made toward achieving the purpose of Title V and reconcile expenditure of funds with the Description of Intended Expenditures and Statement of Assurances.

Annual reports on the Maternal and Child Health Block Grant Programs, for FFY'82, FFY'83 and FFY'84 were submitted to the Secretary of Health and Human Services. These reports were distributed to the Family Health Services Advisory Council, and are available upon request to any interested party.

506 (b) STATE AUDITS

The Commonwealth of Massachusetts will undertake audits of expenditure of these funds every two years in accordance with Section 506 (b).

506 (c) PUBLIC INSPECTION OF REPORTS

In addition, the Commonwealth will make copies of reports and audits available for public inspection within the state.

V. Section 503: PAYMENTS TO THE STATES/MATCHING

In accordance with Section 503 (a), the Commonwealth of Massachusetts is to provide in effect, three-sevenths (42.8%) of the total sums expended in carrying out the purpose of the Maternal and Child Health Services Program. With an anticipated FFY 1986 Federal MCH appropriation of $9.2 million, and State FY 1986 appropriation of approximately $23.5 million, the state proportion of funds will be approximately 72%, thereby exceeding the required match.

MASS. HS 30.2: T53/987

GOVERNMENT DOCUMENTS
COLLECTION

JUL 8 1987

University of Massachusetts
Depository Copy

FFY 1987

MASSACHUSETTS

TITLE V MATERNAL AND CHILD HEALTH SERVICES BLOCK GRANT: DESCRIPTION OF INTENDED EXPENDITURES AND STATEMENT OF ASSURANCES

To The Secretary, United States
Department of Health and Human Services

From the Commonwealth of Massachusetts

Michael S. Dukakis
Governor

Philip Johnston
Secretary
Executive Office of Human Services

Bailus Walker, Jr., Ph.D., M.P.H.
Commissioner
Department of Public Health

Contact Person: October 1, 1986

Catherine Hess
Division of Family Health Services
Massachusetts Department of
Public Health
150 Tremont Street
Boston, MA 02111
(617) 727 - 3372

TABLE OF CONTENTS

Page

I. EXECUTIVE SUMMARY 1.

II. INTRODUCTION 11.

A. Federal Legislative Base
B. State Legislative Base
C. Agency Description

III. NEEDS ASSESSMENT 24.

A. Population Indicators
B. Health Status Indicators
C. Service Indicators
D. Relating Needs Assessment to Program Location

IV. GOALS AND OBJECTIVES 101.

V. DISTRIBUTION OF SERVICES 115.

VI. BUDGET 140.

VII. ASSURANCES 153.

VIII. REPORTS AND AUDITS 162.

IX. DATA COLLECTION 163.

EXECUTIVE SUMMARY

In compliance with the 1981 amendments to Title V of the Social Security Act, which created the Maternal and Child Health (MCH) Services Block Grant, the following document describes Massachusetts' intended use of MCH Block Grant funds in FFY '87, beginning October 1, 1986. As in prior years, this document addresses the entire Massachusetts MCH program, administered by the Department of Public Health's Division of Family Health Services, and thus also covers state funded programs, the federal Special Supplemental Food Program for Women, Infants and Children (WIC), and programs or initiatives funded through other federal grants.

While the remainder of this document presents information on the broad array of Division-supported programs addressing the needs of women, children and their families in Massachusetts, the Executive Summary highlights some of the major issues and priorities which will shape Division programs in FFY '87 and beyond. Last year's (FFY '86) executive summary highlighted five priority areas: reduction of low birthweight and infant mortality; reassessment of the Division's role in meeting the needs of the handicapped and chronically ill; improvement of nutritional status in high risk populations; addressing women's gynecological and reproductive health needs; and preventing violence related morbidity and mortality. All of these areas will continue to demand priority attention in FFY '87, although progress made in FFY '86 and resources which will be available to address them in FFY '87 vary significantly.

Many of the Division's accomplishments in recent years can be credited to the provision of significant increases in state funding for programs. State funding for the Division has increased almost 750% from FY '82 to FY '87, totaling over $41 million in the current fiscal year. Federal MCH funding, on the other hand, has been erratic, with a 25% increase in FFY '83, due to infusion of "Jobs Bill" supplemental funds, but with funding levels below this peak in each succeeding year. This executive summary will also present and describe the impact of this erosion in federal support, as well as discuss the potential effect of further reductions which may result as the federal government attempts to enact a budget which meets the deficit target specified in the Gramm-Rudman Act. The Division's number one priority in FFY '87 will be to attempt to maintain existing services in the face of potentially diminished levels of federal funding.

Finally, this summary identifies one additional priority for FFY '87, that of strengthening organizational and managerial capacity to effectively plan, implement, integrate, monitor and evaluate the greatly expanded set of initiatives and programs for which the Division is responsible.

Maintenance of Existing Service Levels and the Impact of Decreased Federal Support

As noted earlier, since the inception of the block grant method of funding for MCH services, federal funding has been erratic. In FFY '82, when the block grant was funded through a series of continuing resolutions, the appropriation increased from $6.1 million at the beginning of the fiscal year to $7.2 million by the end. The next year, FFY '83, funding leaped to $9.53 million, again towards the end of the year, due to the supplemental "Jobs Bill" funds. FFY '84 saw a decrease to $7.6 million and FFY '85 a jump to $9.2 million. FFY '86's original appropriation represented level funding, but by the end of the year had been slashed 4.3% due to automatic reductions required by the Gramm-Rudman Act. The final FFY '86 appropriation was $8.8 million.

Like the situation in FFY '82, FFY '87 presents a high degree of uncertainty regarding federal funding, which makes planning difficult. President Reagan has proposed an "increase" which would provide Massachusetts the same level of funding as was initially appropriated for FFY '86, $9.2 million. The FFY 1987 Budget Resolution, on the other hand, proposes a $75 million increase for MCH, which would add approximately $2 million to Massachusetts' appropriation. However, as Congress completes work on a budget which meets the deficit target mandated by Gramm-Rudman, this level could be decreased through the authorization and appropriation processes. Further, if Congress and the President fail to enact a budget which meets the Gramm-Rudman goals, automatic across the board reductions may again be triggered. The size of automatic cuts would depend on the exact size of the deficit, but estimates are running as high as 25%. Recent court rulings on the Gramm-Rudman Act itself, and subsequent Congressional response to them, further cloud the picture for FFY 1987.

The Division will have difficulty maintaining existing service levels in FFY '87 even if the President's recommended funding level prevails. As indicated earlier, federal funding has not been maintained at the peak "Jobs Bill" level of FFY '83. Yet the Division has largely maintained the expanded service level made possible by those supplemental funds. To deal both with decreased federal dollars as well as the impact of inflation, the Division each year has attempted to identify areas for administrative savings. Central office administrative operations and managerial staff positions have remained lean and have not been increased significantly as state service dollars have grown.

Yet the Division's capacity to absorb the impact of eroding federal support is not limitless. Due to the cut in federal funds in FFY '86, the Division will be entering FFY '87 with no carryover funds. Block Grant funds can be expended over a two year period, and the Division ordinarily carries forward a small amount from year to year.

Due to the FFY 1986 cutback and the cummulative impact of inflation, the Division was not able to award Cost-Of-Living Allowances (COLAS) to contracted providers of maternal and child health services supported by federal MCH funds. All contracted providers, whether on state or federal funds, are now awarded contracts on the state fiscal year cycle, from July 1 to June 30. Thus decisions on COLA had to be made before the federal FFY '87 appropriation was finalized. The Division level funded federal contractors, assuming that the President's recommended funding level would hold. The Division fully realizes that level funding will create difficulties for affected providers, but the federal funds that would allow for COLA did not appear to be available. At the time the decision was made, the FFY 1987 Budget Resolution had not been completed. If the higher funding level for MCH is appropriated in FFY 1987, the Division should be able to award COLA as well as expand services in priority areas.

Given the situation described above, a further reduction in federal funding would clearly necessitate cutbacks in services and programs. The table below illustrates the choices the Division may face in reducing expenditures to deal with inflation and/or further funding reductions. $440,000 represents approximately 5% of the FFY '86 appropriation. Thus a 5% cut would require cutting one set of services, a 10% cut two sets, etc., or a 25% cut, all of these services. These services represent the same ones, by and large, which were increased with the FFY '83 "Jobs Bill" funds.

$440,000 in Maternal and Child Health Services Buys...

In Lead Paint Poisoning Prevention Services:

- Screening of 16,000 children
- Case Management for 2,000 children
- Inspection of 165 homes for lead paint
- Deleading of 100 units; or

In Adolescent Health and Pregnancy Services:

- Community based health services, education and counseling for 4,000 adolescents; or

In Clinical Services for Handicapped Children:

- 4500 hours of nursing care for disabled children
- Hospitalization and other medical services for 100 chronically ill children
- Developmental assessments for 20 children; or

In Family and Community Services for Handicapped Children:

- Home health care for 25 severely handicapped children
- Housing adaptations for 25 handicapped children
- Case Management for 100 families of severely handicapped children
- Summer camperships for 267 handicapped children; or

In Primary Health Care for Women and Children:

- Support for comprehensive care, including nutrition, social service and health education for 600 low income pregnant women and their infants served in community health clinics.
- Support for comprehensive pediatric care for 2500 low income children through community health clinics.

The plan for use of MCH Block Grant funds which follows assumes the President's proposed funding level of $9.2 million and also assumes that means will be identified to cover the costs of inflation in non-contracted services. The Division is committed to maintaining existing services which are critical to meeting the needs and addressing the problems identified in this document. The Division will attempt to identify additional areas to achieve savings in order to address inflation, although it believes that most savings which could be achieved have already been identified and utilized in past years. While further reductions in managerial and administrative staff can and will be considered, these staff are now barely adequate to effectively administer the expanded service levels of the past few years. By late fall, 1987, the Division will be in a better position to assess its efforts to deal with inflation, should know its federal funding level, and should also know whether supplemental state funding might be available from the state's surplus.

It should be noted that the Division relies on several other sources of federal funding to support its programs. The federal Special Supplemental Food Program for Women, Infants and Children (WIC) is protected from automatic Gramm-Rudman cuts, but vulnerable through the regular budget process. The FFY '87 funding level proposed by President Reagan is intended to maintain the existing caseload, although it may fall short by 30,000 participants nationwide due to estimates of inflation for food costs. A 25% cut in WIC funding would translate into a reduction of over 7,000 participants in Massachusetts.

Other federal funds in jeopardy include Title I (PL 89-313) funds for Early Intervention and several MCH Special (SPRANS) grants that fund an improved pregnancy outcome project and a family day care health improvement project.

Reducing Low Birthweight and Infant Mortality

Massachusetts has already exceeded the 1990 national goal for infant mortality (IMR) which is 9 infant deaths for every 1,000 live births. The 1984 Massachusetts IMR was 8.9, a barely perceptible decline from 1983's rate of 9.0. At its current rate of progress, however, Massachusetts is unlikely to meet the 1990 goal for IMR among minority populations, and may not be able to reach the goal for the number of women who receive prenatal care in the first trimester of their pregnancies.

The Division has devised an overall workplan for the next five years to meet or exceed the 1990 national goals for infant health and has achieved major accomplishments in this area in FFY 1986.

$6.745 million in additional state dollars were appropriated in FY '86 to implement many of the recommendations of the Department of Public Health's Task Force on Prevention of Low Birthweight and Infant Mortality. Six million dollars appropriated to the Department of Public Welfare allowed for creation of the "Healthy Start" program which pays for maternity care for low income uninsured women. Through an interagency agreement the program was operated by the Divison in FY 1986 and in FY '87 the funds were transferred to the Division's budget with almost $15 million available to serve roughly 4500 women. Over 4,000 women were served from the program's start on December 2, 1985 to June 30, 1986. Women are generally enrolling in their third and fourth month of pregnancy, and emphasis will be placed on earlier registration in FY '87. Efforts will also be strengthened in regard to coordination with other programs including WIC and Project Good Health (EPSDT), and on ensuring that all eligible women are enrolled in Medicaid.

State funding also allowed the Division to target 15 communities for focused efforts to decrease low birthweight and infant mortality. The communities contain high concentrations of at risk groups, including minorities, teens, and low-income women. State dollars ensure consultation and technical assistance to community coalitions in their efforts to assess needs and problems and devise community based strategies to address them. Several communities with a clearly identified need for additional services received funding to expand existing programs.

Support for these coalitions will be available through December 1987 and release of a statewide, competitive Request for Proposals (RFP) for Maternal and Infant Care (MIC) and Children and Youth (C & Y) projects will follow shortly after. This RFP will provide some opportunity to fund initiatives emerging from the coalitions. The goals of the RFP will be assessed in light of the many recent changes in the Massachusetts maternal and child health care system over the past year. In addition to Healthy Start, these include an increase in the Medicaid rate for obstetricians and nurse midwives, from $508 (for physicians) to $1027 for an "enhanced" obstetric care service. Rates for free-standing community health centers were also increased in July, 1986. Private third party reimbursement for maternity care is now mandated on the same basis as for other medical conditions.

Medicaid eligibility was expanded in July, 1986 to include all income eligible women, regardless of marital or employment status. All of these changes, which are consistent with the DPH Task Force recommendations, will be evaluated along with any changes in federal funding for MCH, Community Health Centers and Medicaid in preparing the MIC/C&Y RFP. If federal funding cutbacks do not occur, Massachusetts has a tremendous opportunity and potential to ensure that all low income women receive early, continuous and comprehensive prenatal care.

State funding to support development of standards of care will also help to ensure a consistent quality of care among providers of maternity services. Comprehensive prenatal, maternity and newborn care standards should be drafted by the end of FFY '87 and can then be used to evaluate and revise as needed, licensure and audit standards for providers.

State funding also supports a statewide education campaign. A poster and brochures in multiple languages emphasizing the steps a woman can take to improve her chances of having a healthy baby have been produced. A slide tape show geared toward providers and community leaders has also been completed. A multi-faceted campaign utilizing the print and electronic media, community coalitions, non-profit organizations and other vehicles for reaching women will continue through FFY '87.

A federal MCH (SPRANS) grant is enabling the Division to ascertain through surveys both women's and provider's assessments of factors influencing utilization of prenatal care. The findings, which will be available in the fall of 1987, will be utilized to develop innovative strategies to ensure early and continuous utilization of prenatal care in four demonstration communities.

Other strategies to improve infant health are outlined in the goals and objectives section of this document.

Reassessing the Division's role in meeting the needs of the handicapped and chronically ill.

Project SERVE, the tri-agency project funded by another special (SPRANS) federal MCH grant, completed its report in FFY '86, and review and assessment of its recommendations has commenced. New Directions makes 14 recommendations, the general thrust of which would be to take the Division away from direct provision of clinical services, and strengthen its role in areas such as planning, information and referral, advocacy, service coordination, early identification and intervention, family support services, quality assurance and financing. The Division has established six committees to review Project SERVE's findings, which have broad implications for the Division's role, organizational structure, and utilization of resources. Comprised of both Division staff and interested outside individuals, the committees will make recommendations to the Division on the priority, feasibility and ramifications of the Project SERVE report. While many of the recommendations could be implemented with a reallocation and reorganization of existing resources, others would require additional revenues. Development of workplans and initiation of their implementation will be a major priority in FFY 1987.

At the same time, the Division will continue with current initiatives to improve and better coordinate services for the handicapped and chronically ill in the state. State expansion funds for FY 1987 will support an increase in the availability of critical family support services, including home health care, and also allow the Division to develop some new alternative models for residential care for severely multiply-handicapped children. A federal grant is also enabling the Division to recruit and train foster, adoptive and home health providers for this population. The Division also is collaborating with the state Medicaid agency to implement a mechanism to waive deeming of parental income of handicapped and chronically ill children who are at risk of institutionalization but who could be cared for at home if services were available. A Home and Community Based Services Waiver to cover 200 children was submitted to the federal government in FFY 1986. The state is now assessing whether its goals would be most effectively met by pursuing approval of the waiver, or by amending the state Medicaid plan to allow case-by-case waiver at the state level. Thus, FFY 1987 should allow the Division to make significant progress in filling in the gaps in the continuum of care that needs to be available to multiply-handicapped children and their families.

The Division will also continue to work to improve transitional services and ensure ongoing services to handicapped and chronically ill individuals over the age of 22. Through an Executive Office of Human Services (EOHS) work group, the Division has assisted in creating a new habilitative service rate for overage residents of pediatric nursing homes that will ensure ongoing services when entitlement to special education services end. The revised regulations for the pediatric nursing homes which improve and enhance care, also allow for waiver of the age limit when more appropriate service alternatives are not available. The EOHS work group has also successfully identified more appropriate, less-restrictive alternatives for many of the overaged residents. In FFY '87, the work group will assess the need for development of other alternatives for this population.

At the request of the state legislature, the Division in FFY 1986 also completed a study on the needs and options for service strategies for genetically handicapped individuals. Should the legislature decide to act on some of these options, the Division may, for the first time, assume a direct role in ensuring services for handicapped adults. Language requiring establishment of such a program was included in the Division's FY '86 budget, however, no funds to implement the program were appropriated.

The Division will also continue to participate and improve its role in transitional planning under the state's "Turning 22" (C.688) legislation.

Improving the Nutritional Status of High-Risk Populations.

Considerable progress has been made in this priority area in FFY '86, but much remains to be accomplished in FFY '87 and future years.

In FFY 1986 the Special Supplemental Food Program for Women, Infants and Children (WIC) continued to serve 63,000 participants, or 44% of those estimated to be eligible for the program. A statewide competitive Request For Proposals (RFP) was conducted in the Spring of 1986, but additional funding was not available at that time to increase the statewide caseload or to target areas of the state serving less than the statewide average percentage of eligibles. However, WIC later received state expansion money for FY '87 which should allow service to an additional 5,000 individuals, for a total of 47% of those in need. Also as part of the RFP process, the Southeast Asian project was incorporated into local programming. WIC also focused on improving administrative systems to ensure effective use of WIC dollars and in FY '87 will develop and implement a plan to improve the WIC Management Information System.

WIC and the Division will continue to advocate for additional funding to reach more of the eligible population. An Advisory Committee for improving WIC service delivery in Massachusetts will also be in place in FFY '87.

The first annual report on Failure-To-Thrive programs was issued in FFY 1986. The Division will continue to support these comprehensive programs that serve severely underweight children.

The fully staffed Office of Nutrition made considerable progress in a number of priority areas. Production of a poster, sponsorship of regional seminars and publication of a newsletter were done in conjunction with the Statewide Breastfeeding Promotion Task Force and the Area Health Education Centers. The Division hopes to continue these activities in FFY '87 and will also seek to facilitate breastfeeding promotion by health care providers through its efforts to develop comprehensive standards for maternity and newborn care. The revised birth certificate as well as programmatic data systems should allow for evaluation of progress in increasing rates of breastfeeding, particularly among low income and minority women.

The Office of Nutrition also assisted the Commissioner in reconvening the Massachusetts Nutrition Board. Mandated to advise the state on nutrition-related needs and strategies to address them, the Board was active in promoting relevant legislation and began to shape its agenda for FFY '87. The relationship between state and federal governments in providing food and nutrition services will be a focus for analysis and recommendations in FFY '87.

Pediatric nutrition surveillance was piloted in the Worcester area in FFY '86, and the results will be analyzed and used to plan and implement a statewide system in FFY '87, if funding allows. Data collection instruments for many Division programs as well as those for the Department of Elder Affairs food programs are being designed or revised to allow for nutrition surveillance. In conjunction with emergency food program providers, the Division is also establishing a data base on these programs.

Technical assistance and training were provided to a number of human service agencies to improve food and nutrition services to clients. These activities will continue in FFY '87 and be utilized to develop standards and guidelines.

Finally, consistent with recommendations made through public hearings and the Division's Advisory Council, a nutritionist has been hired to ensure incorporation of nutrition services within the Division's programs for children with special health care needs. Needs assessment and planning in this area will be closely coordinated with Project SERVE planning.

Addressing Women's Gynecological and Reproductive Health Care Needs

The Division addressed this priority in FFY 1986 by seeking state funding for FFY 1987 to expand the Diethylstilbestrol (DES) education program to address the broader issues of gynecological and reproductive health problems for a more diverse group of women, particularly low-income and minority women.

As additional state funding will not be forthcoming in FFY 1987, the Division will continue to work within existing resources to document reproductive and gynecological health care needs, problems and resources, and to provide limited education and information services. The Division will also continue its attempts to identify resources for expanding current initiatives in this area.

Preventing Violence Related Morbidity and Mortality.

The Division's Women's Health Unit continued to provide both prevention and treatment services for domestic violence and sexual abuse. The Resource Center began publication of a newsletter on these issues. Maintenance of these services will remain a priority in FFY 1987.

The Division participated on an interagency task force on the prevention of teen suicide, which was created in response to heightened public awareness and concern about this issue in several Massachusetts communities. The Division's 1985 Child Death Study provided data that assisted this task force in developing its recommendations.

The completion of the 1985 Child Death Study in FFY '87 will assist the Division in determining its role in prevention of deaths from violent causes including domestic violence, suicide and homicide. Findings will be reviewed and recommendations developed in collaboration with outside experts, advisory groups and the Special Legislative Commission on Violence Against Children, which requested the study. The study will also likely hold implications for a variety of other agencies, and for the state as a whole in preventing child deaths from a variety of causes.

Strengthening the Organization and Management of the Division.

As noted previously, the scope of the Division's responsibilities has increased significantly in recent years, primarily due to new and expanded state initiatives. Additionally, the findings and recommendations of Project SERVE have significant implications for the organizational structure and management mechanisms of the Division. These developments necessitate a review of the Division's organizational structure, including the relationship between Central and Regional offices; its planning and budgeting processes; its data systems; and its monitoring and evaluation systems. This review has been initiated in FFY 1986, and implementation of any identified needed changes will be a priority in FFY 1987 and future years.

This executive summary has reviewed priorities identified for FFY 1986, identified continued and new priorities for FFY 1987, and highlighted concerns regarding the fiscal context of planning for FFY 1987. It should be noted that this summary in no way captures the breadth and depth of the Division's activities, which are described in the document which follows. Most priorities identified in prior years remain significant areas of focus in FFY 1987. Such initiatives as injury prevention, preventive health services for preschool children, interagency efforts to improve adolescent health and numerous others described later are critical components to the comprehensive program which the Division is consistently striving to improve.

II. INTRODUCTION

A. Federal Legislative Base

The 1981 amendments to Title V of the Social Security Act created the Title V - Maternal and Child Health (MCH) Services Block Grant. The purposes of the MCH Block Grant are to enable the states:

1. to assure that mothers and children, especially those with low incomes or limited availability to health services, have access to quality health services.
2. to emphasize preventive measures, such as those to reduce infant mortality and prevent handicapping conditions, and to promote the health of mothers and children through primary pediatric and prenatal care.
3. to provide rehabilitative services to blind and disabled children eligible for Supplemental Security Income (SSI) under the Social Security Act.
4. to provide comprehensive services to handicapped children.

To these purposes, the Title V - MCH Services Block Grant combined the funding from formerly categorical health care programs into a "consolidated health program," including:

- Title V formula grants for Maternal and Child Health (MCH) and Services to Handicapped Children (SHC)
- Supplemental Security Income for Disabled Children Program (SSI-DCP) (section 1615(c) Social Security Act)
- Lead-based paint poisoning prevention programs (section 316, PHS Act)
- Sudden Infant Death Syndrome (SIDS) (section 1121, PHS Act)
- Adolescent Pregnancy Grants (Title VI, Health Services and Centers Amendments of 1978)
- Genetics Grants (National Genetic Diseases Act)*
- Hemophilia treatment centers (section 1131, PHA Act)*

* To be funded from the portion of the block grant "set aside" at the federal level by the Secretary of Health and Human Services.

The MCH Block Grant legislation provided for continuity with past state Title V programs by specifying that the state health agency would be responsible for administration of the programs. The purpose of this document is to describe how the Commonwealth of Massachusetts intends to manage Maternal and Child Health Services during the sixth year of the Block Grant, FFY 1987.

B. State Legislative Base

Under the provisions of Chapter 347, Acts of 1936, General Laws of Massachusetts, the Commonwealth is authorized to accept and expend the funds of the Social Security Act, and the Commissioner of Public Health is authorized to carry out the provisions of Title V. In compliance with this legislative mandate, the Department established the Division of Family Health Services. As a result of subsequent amendments to Title V, other federal initiatives, and its state appropriation, the Division currently administers the following major appropriations:

- Federal Maternal and Child Health Block Grant funds, including funds for SSI-DCP, Adolescent Pregnancy, Lead Poisoning Prevention, SIDS, as well as Block Grant funds from those set aside at the federal level for "Special Projects of Regional and National Significance" (SPRANS);

- Federal Special Supplemental Food Program for Women, Infants and Children (WIC) funds;

- State Family Health Services accounts;

- Federal P.L. 89-313 (Title I) funds for early intervention programs;

- Federal funds for rape crisis services allocated from the Preventive Health and Health Services Block Grant for this purpose;

- Federal Department of Transportation funds administered through the Governor's Highway Safety Bureau for transportation injury prevention programs.

C. Agency Description

The Division of Family Health Services has been organized into three sections and two central support units for the purposes of carrying out the goals of these legislative mandates (see Figure 1). The Division is directed by a board-certified physician Director, and each section is administered by an Assistant Division Director. A board certified pediatrician further provides the Assistant Directors with technical assistance and consultation. The programs of this Division's units can be briefly described as follows:

1. Services to Handicapped Children (SHC)

Under the direction of the Division's Assistant Director for SHC, the SHC section contains programs that will be organized into four units in FFY '87.

a. The Clinical Services Unit provides specialized preventive, therapeutic and rehabilitative care to children with handicapping conditions and their families. Comprehensive multi-disciplinary habilitative services are provided to significantly handicapped children under age 18 for whom services are not available or not affordable, in cooperation with the child's family, primary care providers, school and community. Through specialized clinics directly operated by the Division or from which services are purchased, some 6,000 children throughout the state each year receive care for the following conditions: orthopedic, neurologic, developmental delay, oro-facial, scoliosis, cystic fibrosis, cardiac, epilepsy/seizure, hemophilia and inborn errors of metabolism. In addition, the Unit maintains an epilepsy drug program for seizure medication for needy, uninsured individuals regardless of age. In FFY '84, adaptive housing services and a special medical needs program (which provides limited financial assistance to families of children who, for diagnostic reasons, are ineligible for other clinic unit programs) were added with "Jobs Bill" funds, and these services will be maintained in FFY'87.

b. The Community Services Unit provides access to residential and supportive services for individuals from birth through 21 years of age with disabling conditions. Through the range of services which the Unit supports, families are helped to keep their children as close to home as possible and to ensure that each child is in the most appropriate, least restrictive program possible. Home care services, camperships and short-term residential respite care are offered and a multi-agency, multi-disciplinary team assesses the needs of multiply handicapped individuals. Individuals can also be certified as eligible for more extended care in a pediatric nursing home when that is deemed appropriate.

   Through a variety of different mechanisms, including a Medicaid plan amendment and a state budget initiative, the Community Services Unit is attempting to fill in the gaps in the continuum of care needed by the multiply handicapped.

   During FFY '87, the Unit will continue its participation in interagency task forces to begin to address the needs of multiply handicapped adults.

c. The Case Management Services Unit (CMSU) identifies, coordinates and monitors the comprehensive service needs of multiply handicapped children. Handicapped children between the ages of birth to 18, who receive SSI benefits, or who are served through other Division programs, or who are referred through community agencies are eligible for services. Staff of the Unit, working out of the four regional health offices and in Boston, provide information and referral, technical assistance, individual case advocacy, and coordinated case management services. In addition, Unit staff provide technical assistance, consultation and training to staff of other human service agencies and other organizations on federal and state entitlements and services and on resources available to handicapped children and their families.

The main objective of this Unit is to ensure that multiply handicapped children receive necessary medical, educational, developmental, rehabilitative and social services through the facilitation of interagency collaboration, development of service linkages, and coordinated service planning. Representation on area and regional interagency task forces is an essential component of this Unit's activities to ensure a coordinated service delivery system, identify barriers to services, and develop community resources targeted for multiply handicapped and chronically ill children.

CMSU has developed a case management gradient system outlining different levels of service involvement in order to expand service capacity. Case managers provide ongoing training and education to parents or guardians to enable them to more effectively advocate for their children.

d. The Early Childhood Development Services Unit administers a system of contracted programs designed to help families assist their children in reaching their maximum developmental potential. The Unit offers therapeutic, educational, support and transportation services to children age birth to three who are at environmental, established or biologic risk of developmental disability. Services are provided by professional teams through a statewide network of developmental day care, outreach and training, integrated preschool and early intervention services.

2. Maternal and Child Health (MCH)

Under the direction of an Assistant Director for MCH, in FFY '87 the MCH section will be organized into five units.

a. WIC Unit. The Special Supplemental Food Program for Women, Infants and Children is a federally funded nutrition intervention program which provides specific nutritious foods, nutrition counseling and health care referrals. Funds are allocated in accordance with a needs assessment, which ranks each city and town in Massachusetts with respect to its need for WIC services. Ranking is determined by low birthweight rate, teenage birth rate, neonatal mortality rate, unemployment rate and poverty, (defined as an income under 200% of the federal poverty level). In FFY '87, 35 local agencies across the state will provide WIC services at over 100 sites to low income pregnant, breastfeeding and postpartum women, infants and children up to age 5 who are determined to be at nutritional risk.

b. The Preschool and School Health Unit provides a variety of services and supports a number of programs which focus on the prevention of morbidity and mortality and the promotion of preventive health services for all children in the Commonwealth.

A major programmatic component of the Unit is injury prevention. The services of the Statewide Comprehensive Injury Prevention Program (SCIPP) have been considerably expanded as a result of federal SPRANS funds received to implement injury prevention initiatives within established child health service programs and to develop an injury surveillance system. Current efforts are devoted to developing training materials, disseminating both materials and public policy recommendations, and providing training to a variety of health professionals and community service agencies within Massachusetts and other state MCH programs. In FFY '86 and FFY '87 SCIPP is also funding nine local agencies to implement comprehensive injury prevention programs. Other program objectives include improvement of existing sources of injury data and development of mechanisms for improvement of injury surveillance. The Massachusetts Passenger Safety Program (MPSP), funded by the National Highway Transportation Safety Administration, through the Governor's Highway Safety Bureau, is based in the Unit and promotes passenger safety by providing education, information and technical assistance as well as funding car seat loaner programs at the local level. Funded programs in FFY '87 will include, in addition to the nine local projects: a Statewide Poison Control System; the Injury Prevention Resource Center, a comprehensive resource for health professionals, schools, community agencies, child health service programs, business and industry, and others interested in injury control. The Preschool and School Health Unit also develops policy and provides information, education, consultation, and technical assistance in the areas of preschool and school health services and childhood injury prevention. The Unit establishes and enforces regulations regarding school health programs, and administers school health screening programs for vision, hearing, and postural defects. Programs funded through the Unit in FFY'87 will include the Preschool Enrichment Team and dissemination and training with Health in Day Care, a guide for day care providers in Massachusetts, purchase and repair of hearing aids for financially eligible children; and Lead Paint Poisoning Prevention programs, administered jointly with the state's Childhood Lead Poisoning Prevention Program (CLPPP).

c. The Perinatal and Genetics Unit provides a variety of services and supports a number of programs which focus on the prevention of morbidity and mortality, particularly in the perinatal period, and provides genetic education and information to providers and consumers.

This Unit develops policy and provides information, education, consultation, and technical assistance in the areas of perinatal health, including the effects of genetic and environmental factors on reproductive outcomes. The Unit manages a statewide high risk infant identification system which collects and analyzes data on premature infants and infants born with risk factors such as meningitis or severe jaundice, using the information to develop strategies to address disproportionately high infant morbidity, mortality and anomaly rates. During FFY 1986, the Unit developed an extensive media and outreach campaign on the importance of early and continuous prenatal care, actively aiding communities around the state to develop local coalitions around perinatal health issues. Programs funded through the Unit in FFY '87 will include: a toll free hotline for information on the effects of various environmental exposures on reproductive outcomes; community based high risk infant and family support programs; discharge planning and community linkage in Neonatal Intensive Care Units; the Sudden Infant Death Syndrome Program, providing counseling and support to affected families; and a federally funded SPRANS project to identify and then address barriers to accessing prenatal care, which is entering its second year. Additionally, grant applications have been submitted by the Unit for a pregnancy smoking cessation project and a reproductive outcome surveillance system.

d. The Primary Care Unit supports the provision of high quality primary health care services for pregnant women, mothers, children and adolescents, with the focus on assurance of availability of services to high-risk and low-income populations. The Unit is involved in developing standards for ambulatory and hospital care and for birthing centers. Information, education and technical assistance are provided in the areas of adolescent health and pregnancy, family planning and nutrition.

Programs funded through this Unit include Maternal and Infant Care (MIC), Children and Youth (C&Y), Comprehensive Adolescent Health, Pregnant and Parenting Adolescents and Failure to Thrive (FTT) Programs, and newly initiated in FFY '86, the Healthy Start program.

The prenatal (MIC) and pediatric (C&Y) projects provide comprehensive multi-disciplinary care to high risk, low-income pregnant women, mothers and children with medical care augmented by social, nutritional, family planning, dental and other preventive health services. All services are available to the uninsured on a sliding fee scale.

Adolescent health services include counseling and education that focus on nutrition, contraception, sexuality, adolescent pregnancy, parenting skills, and the promotion of good health habits. Specialized pregnant and parenting adolescent programs are designed to ensure early identification of pregnant adolescents in order to link them with prenatal care, and provide educational, counseling and social services to meet their special needs.

Funded with state money as part of the response to the 1983 Massachusetts Nutrition Survey, the Failure To Thrive Programs (FTT) were initiated in April of FFY '84 following a statewide RFP process. The FTT programs provide diagnosis and treatment for families with children who are severely underweight and show persistent deviation below their established growth curves. Programs provide intensive case management and follow-up as well as consultation and education to community based providers. All programs utilize a multi-disciplinary team approach.

Healthy Start, which began operation as of December, 1985 is designed as a payor of last resort program for pregnant women who are uninsured, are ineligible for Medicaid and whose incomes are under 185% of the poverty level. The program pays for prenatal care, delivery, newborn care, pharmacy and lab tests related to pregnancy. In FFY 1986, the program was funded by the Department of Public Welfare with state funds, and is operated by the Department of Public Health through an interagency agreement.

e. The Women's Health Unit provides a number of services designed to decrease morbidity and mortality and to promote knowledge and well-being among women in Massachusetts. The Women's Health Unit places particular emphasis on assessing health risks and developing services for low-income and minority women. Health issues are approached within the context of women's roles and social conditions in our society; where health related services for women have been historically under-funded, the Women's Health Program has attempted to collect statistical evidence and design programs for change.

Services in FFY '87 will include rape, sexual abuse, and family violence prevention as well as comprehensive services to rape victims; diethylstilbestrol (DES) information, education and diagnostic evaluations; occupational health education for office workers, health care workers and reproductive health concerns of working women; health programs for incarcerated women, including workshops, individual counseling and support groups and a pilot project implementing a comprehensive health education program for adolescent girls in charge of the Delinquent Youth system; a survey and needs assessment of Cambodian refugee women's health issues; a public education campaign on the prevention of domestic violence; health workshops for staff and clients in shelters for homeless women and children; and a pilot project on prevention of cervical and breast cancer for older, low-income women in Southeastern Massachusetts.

3. Administration

The shared, centralized administrative and support services of the Division are organized into 5 units. Contracting, fiscal and budgeting support services are under the direction of the Assistant Director for Administration and Finance, with the Division Director acting as supervisor for the Statistics and Evaluation Unit and the Policy Office.

a. Administration/Contracts Unit has the responsibility for processing, providing technical assistance, reviewing, and financially approving all state and federal consultant and purchase of service contracts, and payment of purchase of service invoices. All agency contracts must be channeled through the Contracts Unit where they are reviewed for compliance with all state and federal administrative regulations. Contract budget documents are reviewed to insure allowability of costs. The Contracts Unit also schedules and coordinates all requests for audits on program providers.

In FFY '87, the Contracts Unit will perform extensive fiscal reviews and analyses of all state and federal purchase of service contracts. The fiscal site visits will be combined with programmatic site visits to increase the Division's ability to determine the cost-effectiveness of specific services.

Commencing in FFY '87, the Contract Unit's mechanism for reimbursement of services to purchase of service providers will convert from the computerized MIDAS system to the statewide MMARS system.

b. Administration/Fiscal Unit has the responsibility for reviewing, processing and paying clinical, general administrative, contractual and consultant invoices. As the invoices are processed, the expenditures are recorded in the general ledgers and payment cards according to program budget areas. Quarterly financial reports are produced and the information is fed back to program managers and the Budget Unit in order to monitor expenditure levels and allow for timely reprogramming of funds. In addition to invoice processing, the Unit is responsible for maximizing third party revenue, monitoring cost allocation and reporting cost savings, control of budgetary accounts payable and conducting periodic audits to detect fraud, abuse, errors or duplicate payments. The Division subsidizes clinical services for clients only after all third party reimbursements options have been exhausted.

In FFY 1986 the Fiscal Unit converted its payment and recording mechanisms to MIDAS. In FFY '87 the Fiscal Unit will also convert to MMARS. This automated system should provide more timely information on account expenditure levels, allow for more timely transfer between accounts, and expedite the processing time for payment to purchase of service providers.

During FFY '86 the Fiscal Unit implemented a payroll system for consultant payments. This allows the regular consultant staff the advantage of regular reimbursements, tax withholding and a decreased paperwork requirement for consultants and administrative processors.

c. Administration/Budget Unit has two functions; personnel management and state and federal budget management. All agency positions must be cleared through the Budget Unit in order that adequate funds be budgeted for the position. The second function of the Budget Unit involves the preparation, monitoring, and rebudgeting of both state and federal budget appropriations. In addition to preparing the standard budget forms for the state and federal budget submissions, the Budget Unit must also prepare quarterly spending plans for the state and reconcile on a monthly basis the agency's federal expenditures with those shown by the Department's central fiscal office.

d. The Statistics and Evaluation Unit assists in collecting and analyzing data and in developing needs assessment, evaluative and research methodologies. Its activities include developing and providing comprehensive data sets on target populations and services that can be used to plan programs, comply with federal and state reporting requirements, and inform the public and professionals; evaluating program effectiveness and impact on health status; coordinating research carried out within the Division or by academic institutions using the Division's target populations; assisting in ongoing needs assessment and planning; and working with other statistical units in the Department of Public Health.

e. The Policy Office, which works closely with the Statistics and Evaluation Unit, serves as an analytic and informational resource to the Division, other state agencies, and the public. The Office monitors and analyzes federal and state legislation as well as regulations and policies which bear on maternal and child health; develops and implements mechanisms for citizen participation in planning; develops strategies for achieving the overall mission and goals of the Division; coordinates public and internal planning processes; and provides information and education programs for staff and the public. It is also responsible for specialized policy and research activities which cut across program areas, including the 1985 Child Mortality Study and the newly established Office of Nutrition.

The 1985 Child Mortality Study was initiated at the request of the State Special Legislative Commission on Violence Against Children with funding appropriated in state FY 1985. The overall goal of the study is to analyze the characteristics and circumstances of childhood deaths in order to develop recommendations for strategies to reduce preventable child deaths in Massachusetts. Special emphasis will be placed on investigating deaths from both intentional and unintentional injuries including suicide and homicide.

The Office of Nutrition was established within the Policy Office in 1984. State funding for the Office was provided in response to the findings of the Department's 1983 Massachusetts Nutrition Survey which identified chronic malnutrition as a significant health problem among low-income Massachusetts children. The goals of the Office of Nutrition include: establishing a system for ongoing surveillance of nutritional status among high-risk groups in the Commonwealth; identifying needs and problems related to nutritional status and services, and developing strategies to address them, including improved referral systems, coordination of services and improvements in state policy, planning and programming; and providing consultation and technical assistance to other state agencies, providers and consumers in order to ensure integration of high-quality nutrition services within existing systems. The Office of Nutrition is also responsible for supporting the work of the Massachusetts Nutrition Board, a group mandated by state statute (M.G.L. C.6, S.181 and 182) to advise the state on nutrition related needs, services and policies. Comprised of 9 gubernatorial appointees as well as representatives of 9 state agencies, the Board was reconvened in 1985 after several years of inactivity. The Director of the Office of Nutrition has been designated by the Commissioner of Public Health to Chair the Board.

The Policy Office also provides staff support for the Advisory Council described below.

4. DFHS Advisory Council

Established by the Commissioner of the Massachusetts Department of Public Health in March 1982, the Council is composed of 24 professionals, providers, advocates and citizens, as well as ex-officio members from relevant state agencies. The Council provides broad representation for Maternal and Child Health interest groups and is made up of individuals with longstanding interest in and experience with family health programs. The Council achieves representation for both urban and rural interests; maternal and child health as well as handicapped children's services; preschoolers, school-aged children, adolescents and women a range of professional interests, including doctors, nurses, lawyers and physical therapists; and primary as well as tertiary care.

Currently chaired by Dr. Deborah Walker, Associate Professor, Harvard School of Public Health, the Council meets every two months and is charged with a number of responsibilities. Chief among them is reviewing, commenting on, and making recommendations about the Division's Block Grant applications prior to their submission. The Council therefore provides one vehicle for meeting the requirements of Section 505 regarding public comment on this document.

In summary, this brief description of the Division's sections and units provides an orientation to the general objectives of each of the units. These will be described more fully in the Description of Intended Expenditures. In general, however, the functions of the DFHS program are:

1. To provide services to targeted groups of women, children and families through direct employees or contracted agencies.

2. To provide technical assistance to agencies on the provision of specialized services and the public health aspects of maternal and child health.

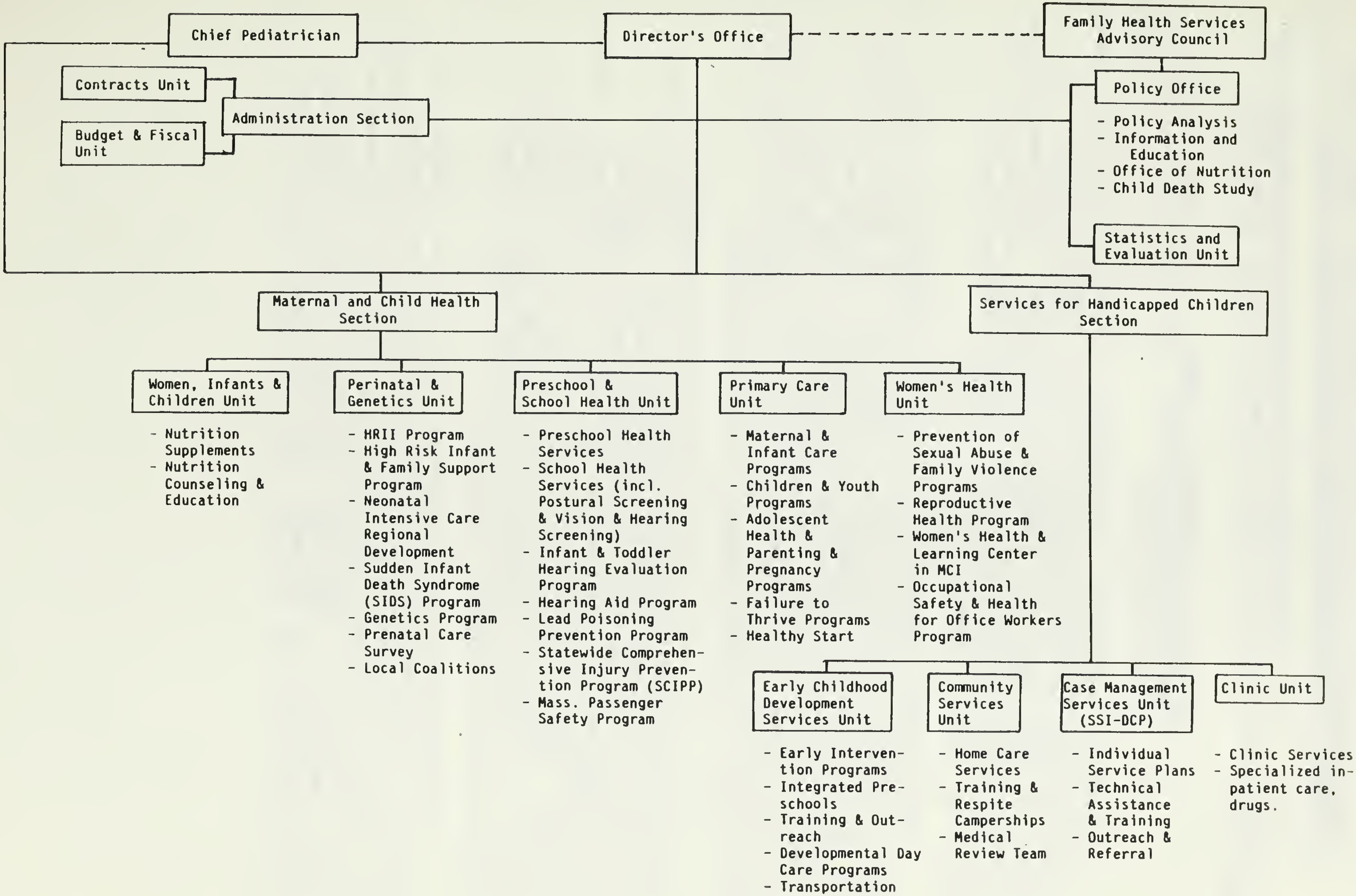
3. To set standards for the provision of services.

4. To utilize epidemiological analysis of child health problems and evaluation of program effectiveness as tools in establishing MCH policy and programs.

5. To coordinate services provided in the public and private sector which are targeted to women, children and their families.

Figure I

DIVISION OF FAMILY HEALTH SERVICES ORGANIZATIONAL CHART


Chief Pediatrician
Director's Office
Family Health Services Advisory Council
Contracts Unit
Administration Section
Budget & Fiscal Unit
Policy Office
- Policy Analysis
- Information and Education
- Office of Nutrition
- Child Death Study
Statistics and Evaluation Unit
Maternal and Child Health Section
Services for Handicapped Children Section
Women, Infants & Children Unit
- Nutrition Supplements
- Nutrition Counseling & Education
Perinatal & Genetics Unit
- HRII Program
- High Risk Infant & Family Support Program
- Neonatal Intensive Care Regional Development
- Sudden Infant Death Syndrome (SIDS) Program
- Genetics Program
- Prenatal Care Survey
- Local Coalitions
Preschool & School Health Unit
- Preschool Health Services
- School Health Services (incl. Postural Screening & Vision & Hearing Screening)
- Infant & Toddler Hearing Evaluation Program
- Hearing Aid Program
- Lead Poisoning Prevention Program
- Statewide Comprehensive Injury Prevention Program (SCIPP)
- Mass. Passenger Safety Program
Primary Care Unit
- Maternal & Infant Care Programs
- Children & Youth Programs
- Adolescent Health & Parenting & Pregnancy Programs
- Failure to Thrive Programs
- Healthy Start
Women's Health Unit
- Prevention of Sexual Abuse & Family Violence Programs
- Reproductive Health Program
- Women's Health & Learning Center in MCI
- Occupational Safety & Health for Office Workers Program
Early Childhood Development Services Unit
- Early Intervention Programs
- Integrated Preschools
- Training & Outreach
- Developmental Day Care Programs
- Transportation
Community Services Unit
- Home Care Services
- Training & Respite Camperships
- Medical Review Team
Case Management Services Unit (SSI-DCP)
- Individual Service Plans
- Technical Assistance & Training
- Outreach & Referral
Clinic Unit
- Clinic Services
- Specialized in-patient care, drugs.

III. NEEDS ASSESSMENT: DESCRIPTION OF POPULATIONS, AREAS, AND LOCALITIES IDENTIFIED AS BEING IN NEED OF MCH SERVICES

There are three major sources of information to identify women and children in need of Maternal and Child Health (MCH) services. These are:

A. Descriptive population data
B. Health status indicators
C. Service indicators

Population indicators are intended to show the potential number of individuals eligible for MCH services. The main source of population data is the 1980 Federal census which contains a wide variety of demographic and economic information. Supplementing the census are vital registration data which provide maternal age and geographic distribution of births. Another source of general population data is unemployment statistics.

Health status indicators are normally measures or estimates of specific health problems. Some of these, such as low birthweight rates and infant and neonatal mortality rates are derived directly from statewide vital registration statistics. Others are based on projects within MCH such as the Statewide Childhood Injury Prevention Program (SCIPP) for accident rates. Other Public Health Units are sources of information, such as the State Laboratory for data on lead paint poisoning. Many of these programs provide either sample data or estimates based on limited coverage.

Service indicators are statistics based on measures of populations currently served by programs in MCH. These include Services to Handicapped Children (SHC) clinics, the Early Intervention Program (EI), and the Supplemental Security Income-Disabled Children Program (SSI-DCP). In some cases, there is little information on the size of the population in need of services. This is particularly true in the case of handicapped children. However, in several other programs such as Women, Infants, and Children (WIC) and the Lead Poisoning Prevention Program, there are reliable estimates of the total need.

In determining areas of greatest need for the placement of services, all three sources of information must be examined. The Division of Family Health Services has conducted needs assessments in a number of program areas which have statistically combined relevant measures of population and health status indicators with service indicators. These have been used during the stage when program proposals are reviewed. Past, ongoing and future needs assessment activities are described in the last part of this section.

Depending on the type of services required and the means of delivering them, 3 different types of planning area are used:

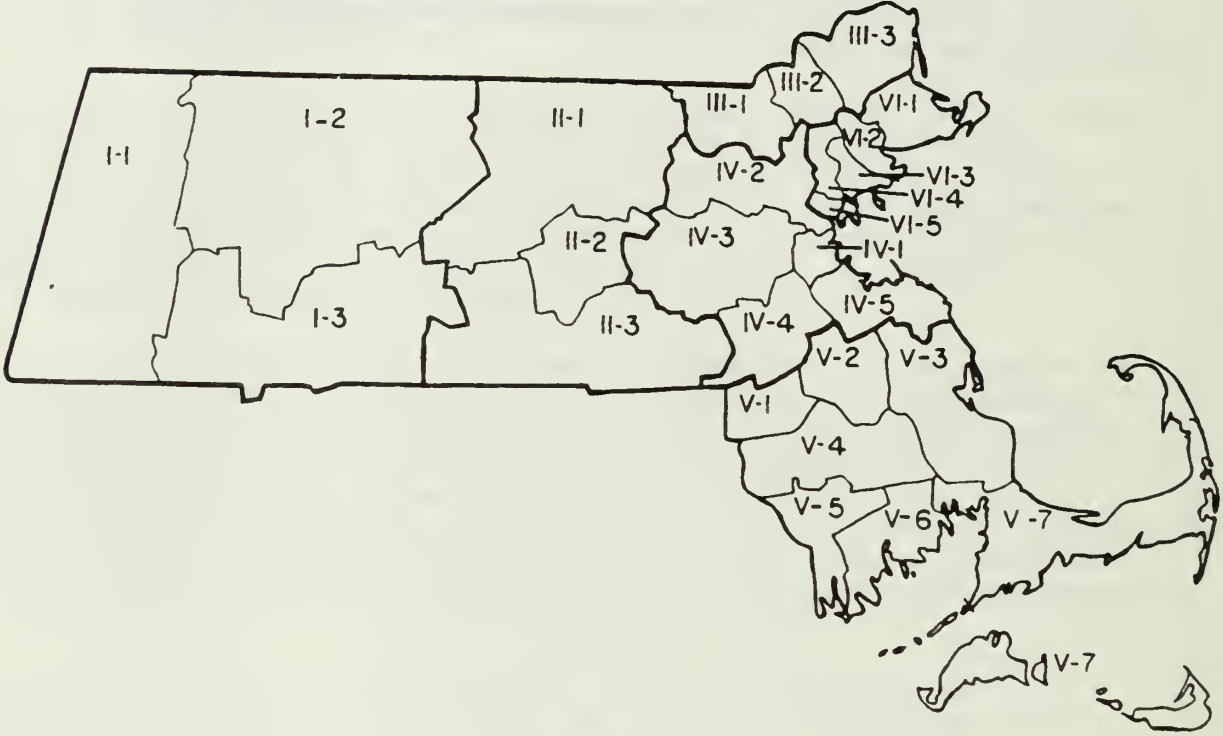
1. Health Service Areas (HSAs) - Figure 2-I
2. Department of Public Health (DPH) Regions - Figure 2-II
3. Cities and towns - Figure 2-III

Some programs such as the Case Management Services Unit (SSI-DCP) and the Early Intervention program use slight modifications of these.

Figure 2

MASSACHUSETTS PLANNING AREAS

I. Health Service Areas



II. DPH Areas

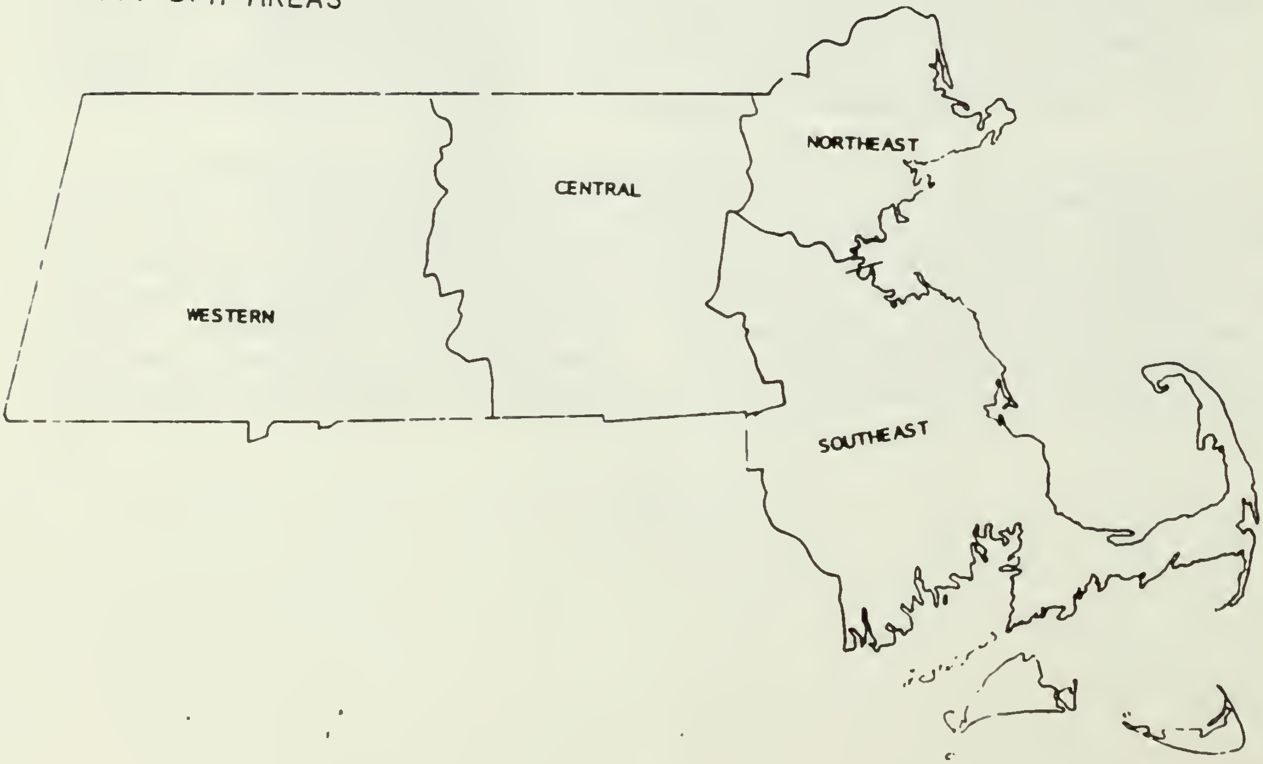
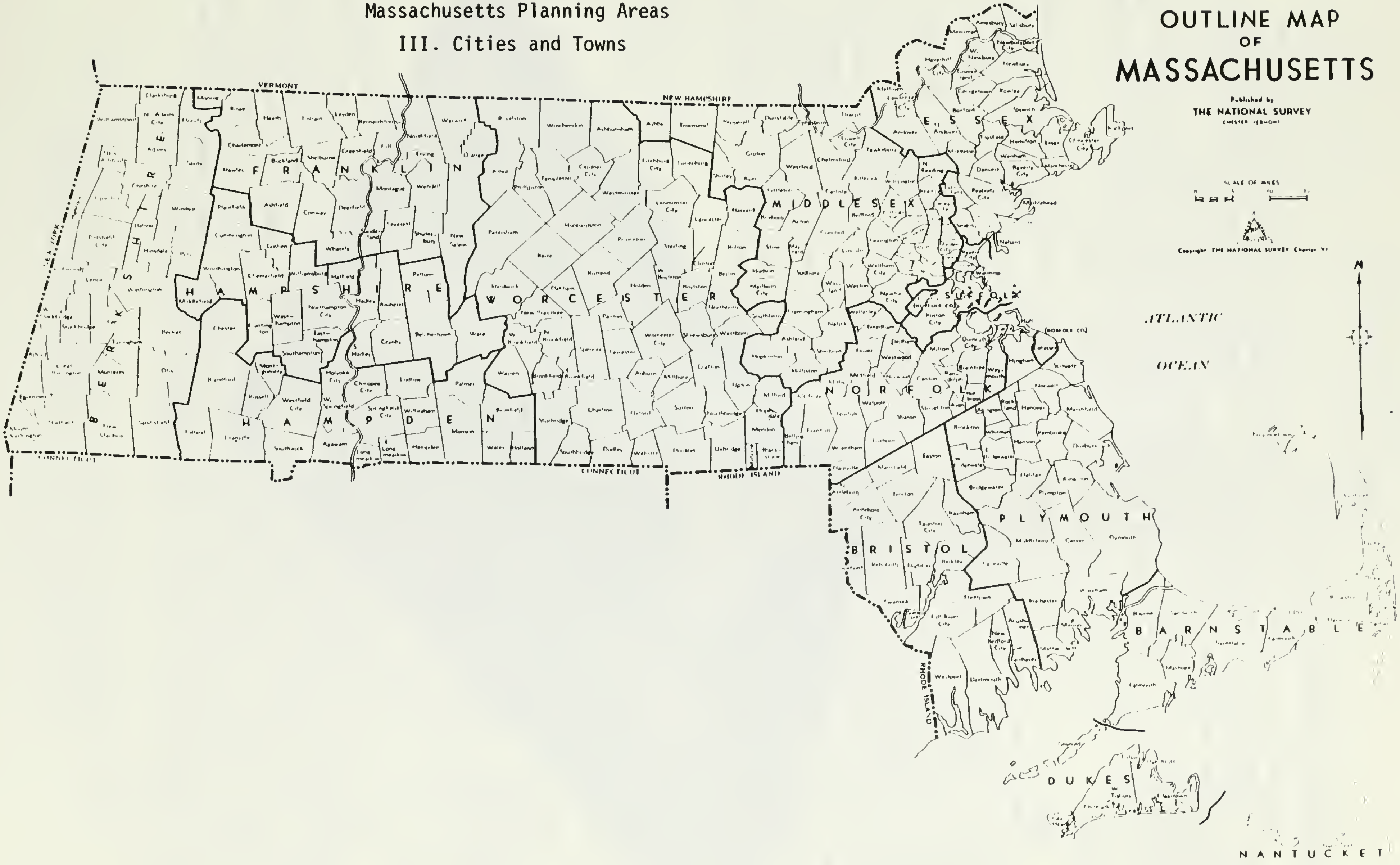


Figure 2

Massachusetts Planning Areas

III. Cities and Towns



A. POPULATION INDICATORS

Population Size and Distribution

In 1980, the population of Massachusetts was 5,737,037. No marked changes in size are expected to occur during the next 10 years. The highest concentration of population is in Boston and its surrounding suburbs (Figures 3 & 4). Substantial pockets of high density are also found in the Worcester, Springfield, Lawrence/Lowell, and Fall River/New Bedford areas. Nearly 75% of the state's population lives in the eastern half of the state. More than a third of the total population lives in the HSA that includes Boston.

While the majority of people live in or close to cities, there is a clear decline in the size of urban areas. Of the 25 cities with the largest population of children, six (Haverhill, Brockton, Taunton, Weymouth, Framingham, and Plymouth) increased in overall population since 1970 (Table 1). All of the rest declined considerably, in some cases by as much as 17%. Declines of even greater magnitude occurred in the population of children in urban areas. In many cities, such as Boston, Cambridge, Quincy, Somerville, Chicopee, and Weymouth, the number of children under age 5 was reduced by 30 to 45%. Some of this reduction is movement towards the south and southwest portions of the state. Plymouth, for example, nearly doubled both it's overall population and the population of children under age 5. However, a large fraction of the decline in numbers of children in Massachusetts is a result of reduced fertility.

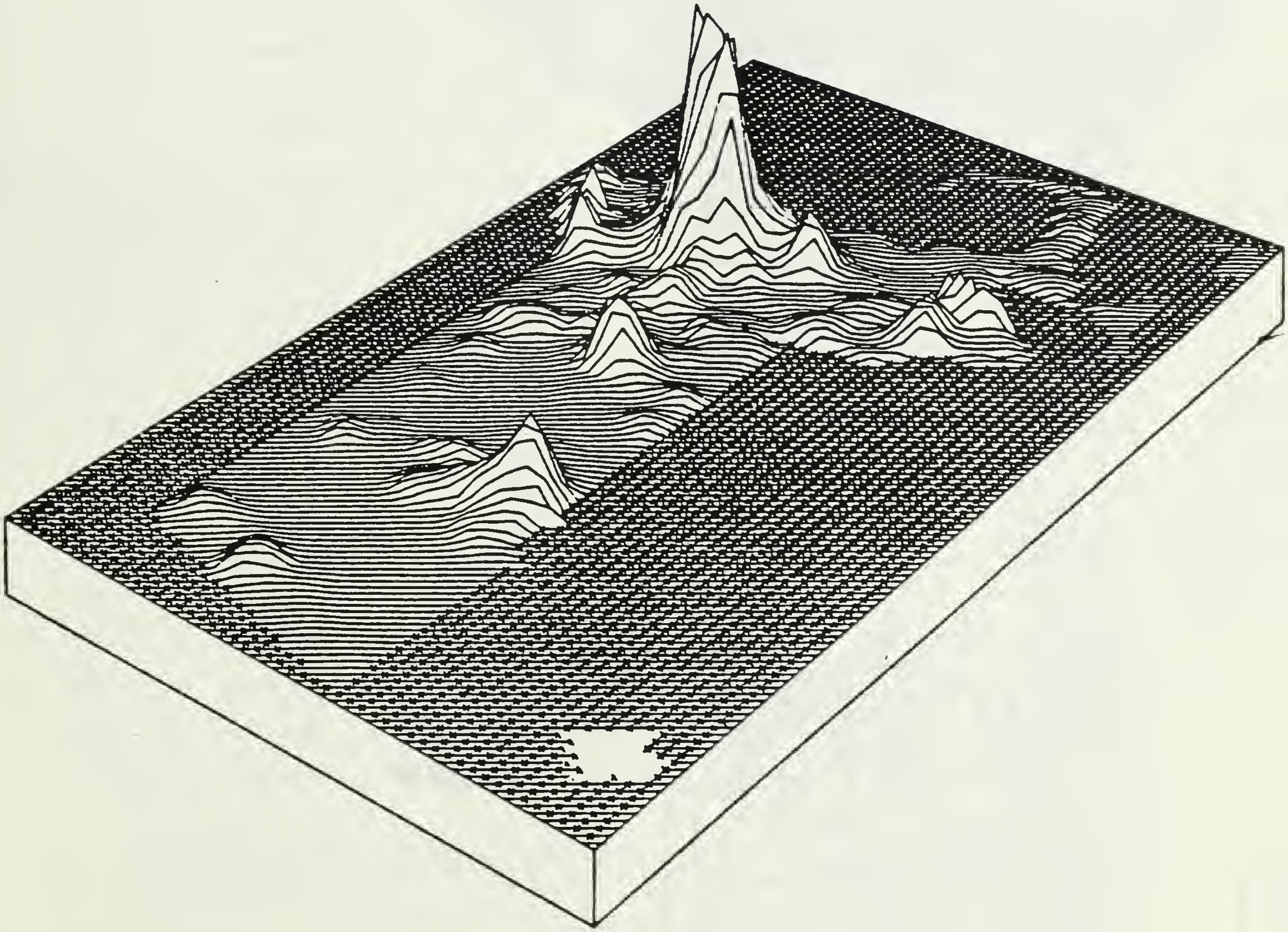
It is not clear at this point who is moving out of the cities. If the wealthier segments of the population are leaving the cities, they may be leaving behind a population that is poorer on average and in greater need of services.

In 1980, there were 1,721,520 children under the age of 19 in the state (Tables 2 & 3). They formed nearly a third of the state's population. There were 78,198 births in 1984. The preschool population (aged 0-4 years) was 337,215 in 1980; the early school-age population (5-13 years) was 737,918; the teen population (14-19 years) was 646,387; and the young adult population (20-21 years) was 228,772.

The age distribution of the state's population is generally uniform from one region to another. The greatest variation in age distribution between regions is only 3.2% in the 5-13 year age group. The highest concentrations of early school-age children are in HSA's 3 and 5. The greatest proportion of women of childbearing age and also the largest absolute numbers of women in that age category are in Boston and vicinity. Children born during the baby boom of the 1950's and 1960's are now in their peak reproductive years and form the largest single age group in the state's population.

Figure 3.

1980 POPULATION DENSITY OF MASSACHUSETTS



Source: University Computing Center, University of Massachusetts at Amherst
Programming by Ron Lussier
Data base compiled by Dennis Swartout and Mary Richards

Figure 4

POPULATION - BASED ON 1980 CENSUS DATA

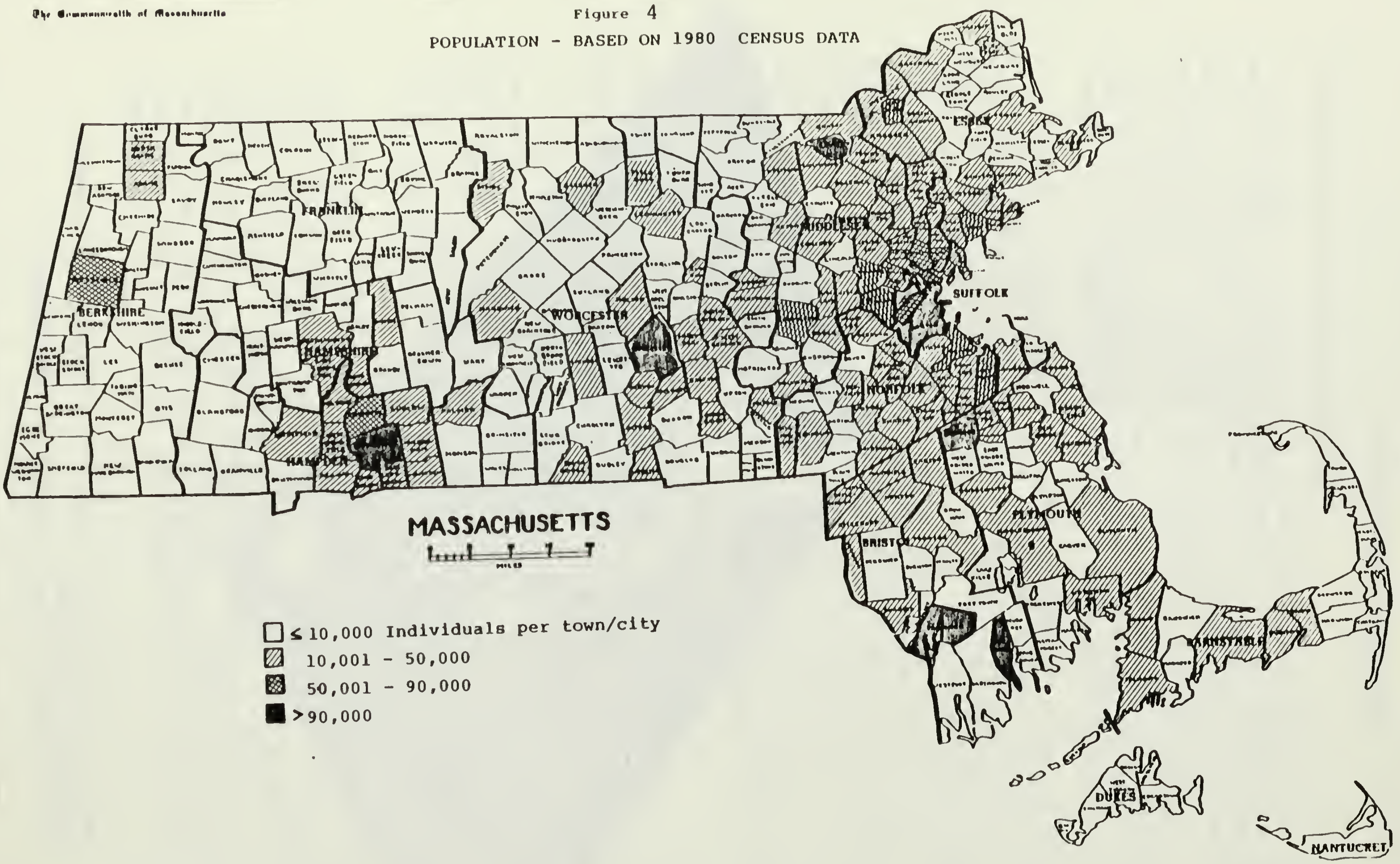


Table 1

CHANGES IN TOTAL POPULATION SIZE AND CHILDREN UNDER 5 SINCE 1970

25 CITIES WITH THE LARGEST CHILD POPULATIONS IN MASSACHUSETTS

		Total Population		Child Population	
Rank Order By Size Of Child Population	City / Town	1980 Population	Percent Change 1970 to 1980	Children Under 5	Percent Change 1970 to 1980
1	Boston	562,994	-12.2	30,118	-39.7
2	Springfield	152,319	- 7.1	10,531	-21.6
3	Worcester	161,799	- 8.4	9,574	-26.0
4	Brockton	95,172	+ 6.9	6,988	-24.5
5	Lowell	92,418	- 1.9	6,908	-18.1
6	New Bedford	98,478	- 3.2	6,792	-13.9
7	Fall River	92,574	- 4.5	6,311	-23.7
8	Lawrence	63,175	- 5.6	5,293	- 5.8
9	Lynn	78,471	-13.1	5,012	-33.6
10	Somerville	77,372	-12.8	3,990	-47.1
11	Cambridge	95,322	- 5.0	3,928	-33.6
12	Quincy	84,743	- 3.7	3,835	-44.7
13	Newton	83,622	- 8.4	3,707	-34.7
14	Framingham	65,113	+ 1.7	3,422	-42.9
15	Chicopee	55,112	-17.3	3,330	-40.6
16	Holyoke	44,678	-10.8	3,177	-25.5
17	Pittsfield	51,974	- 8.8	3,163	-31.0
18	Haverhill	46,865	+ 1.6	3,112	-18.6
19	Taunton	45,001	+ 2.8	3,070	-12.0
20	Plymouth	35,913	+93.0	2,979	+84.8
21	Malden	53,386	- 4.9	2,911	-38.8
22	Weymouth	55,601	+ 1.8	2,885	-38.9
23	Medford	58,076	- 9.8	2,759	-43.1
24	Waltham	58,200	- 5.5	2,657	- 4.4
25	Fitchburg	39,580	- 8.7	2,536	-28.0
	MASSACHUSETTS	5,737,037	+ 0.8	337,215	-28.3

Table 2

MASSACHUSETTS POPULATION BY AGE - 1980

	AGE (YEARS)				FEMALES
GEOGRAPHIC AREA	0 - 4	5 - 13	14 - 19	20 - 21	15 - 44
MASSACHUSETTS	337,215	737,918	646,387	228,772	1,354,656
HSA SUB-AREAS					
11	8,409	18,368	16,858	5,667	32,091
12	9,408	19,963	22,338	12,875	46,584
13	30,135	63,768	55,694	18,242	110,883
21	15,411	30,034	24,787	8,482	50,011
22	13,760	28,874	27,196	11,339	53,333
23	15,898	34,809	26,130	7,176	51,854
31	15,882	35,212	28,162	8,886	53,802
32	10,048	20,690	15,903	4,958	32,102
33	7,650	16,225	12,668	3,520	26,415
41	36,368	71,802	76,051	38,253	186,535
42	22,850	52,675	50,323	19,687	115,200
43	24,887	58,976	55,887	19,161	118,954
44	8,935	23,098	19,518	5,130	37,387
45	15,084	38,684	35,930	10,785	69,581
51	6,253	13,048	10,151	3,211	21,434
52	14,173	30,648	24,217	7,933	48,973
53	10,917	24,272	15,605	3,536	33,148
54	7,190	15,528	11,692	3,187	23,885
55	9,460	21,227	15,358	4,715	31,124
56	10,212	20,702	16,924	5,506	33,689
57	10,066	21,614	16,431	4,781	35,653
61	5,962	13,462	12,121	3,613	25,408
62	6,793	15,861	14,696	4,580	31,070
63	7,567	16,862	14,085	4,172	28,816
64	6,172	14,566	12,268	3,529	25,401
65	7,725	16,950	15,394	5,848	33,692

Table 3

POPULATION BY AGE

FOR THE 25 CITIES WITH THE LARGEST CHILD POPULATIONS IN MASSACHUSETTS

		AGE (YEARS)				FEMALES
		0 - 4	5 - 13	14 - 19	20 - 21	15 - 44
1	Boston	30,118	57,663	63,457	33,090	150,887
2	Springfield	10,531	20,452	17,398	6,404	34,802
3	Worcester	9,574	18,375	18,689	9,015	36,375
4	Brockton	6,988	14,349	10,674	3,401	22,277
5	Lowell	6,908	12,264	10,682	4,577	21,067
6	New Bedford	6,792	12,600	9,768	3,456	20,361
7	Fall River	6,311	12,481	9,076	3,162	18,897
8	Lawrence	5,293	8,774	6,261	2,305	13,587
9	Lynn	5,012	9,856	7,995	2,581	16,846
10	Somerville	3,990	7,921	7,959	4,012	20,205
11	Cambridge	3,928	7,247	9,848	6,770	28,287
12	Quincy	3,835	8,690	8,489	3,192	19,582
13	Newton	3,707	8,913	9,710	3,335	21,361
14	Framingham	3,422	7,837	7,188	2,718	16,727
15	Chicopee	3,330	6,557	5,849	1,864	11,952
16	Holyoke	3,177	5,890	4,815	1,490	9,241
17	Pittsfield	3,163	6,818	5,819	1,536	11,240
18	Haverhill	3,112	6,222	5,021	1,616	10,396
19	Taunton	3,070	5,898	4,827	1,624	10,203
20	Plymouth	2,979	5,953	3,238	736	8,136
21	Malden	2,911	6,195	5,037	1,776	12,165
22	Weymouth	2,885	7,280	6,651	2,023	13,118
23	Medford	2,759	6,489	6,890	2,738	13,407
24	Waltham	2,657	5,570	7,120	3,769	14,938
25	Fitchburg	2,536	4,665	5,053	2,212	9,472
	MASSACHUSETTTS	337,215	737,918	646,387	228,772	1,357,022

Fertility Rates

In 1980, there were 1,357,025 women of childbearing age (15-44 years) in Massachusetts. The fertility rate (live births/1,000 women 15-44) was 54.5 in Massachusetts in 1981 and 53.5 in 1980. There is considerable variation in fertility rates across the state (Figure 5). The highest rates are seen in HSA III (Lawrence area) and HSA V (southeastern Massachusetts). In these areas, all of the subareas are above the statewide figure. Boston is slightly below the state rate and its wealthier suburbs (HSA IV) are considerably below the state rate. In some cities, such as Lawrence, Lowell, and Holyoke, fertility rates are close to 50% higher than the state rate. Table 4 shows that of the 25 largest cities and towns, 11 exceed the state fertility rate by more than one standard deviation.

By 1984, population estimates showed that the fertility rate had increased to 54.9. Overall, however the fertility rate has declined since the late 1960's and 1970's. This decline in the number of births will result in smaller numbers of reproductive aged women in the near future.

Although fertility rates have declined for women of all ages, the distribution of births has shifted to older age groups. Between 1974 and 1984, the proportion of births to women ages 25-29 increased 10%. For women ages 30-34, the proportion increases to 69% and for women ages 35-39 the proportion increases to 85% increase. Much of these changes in patterns of childbearing are a result of women delaying reproduction and having fewer children.

Teenage Births

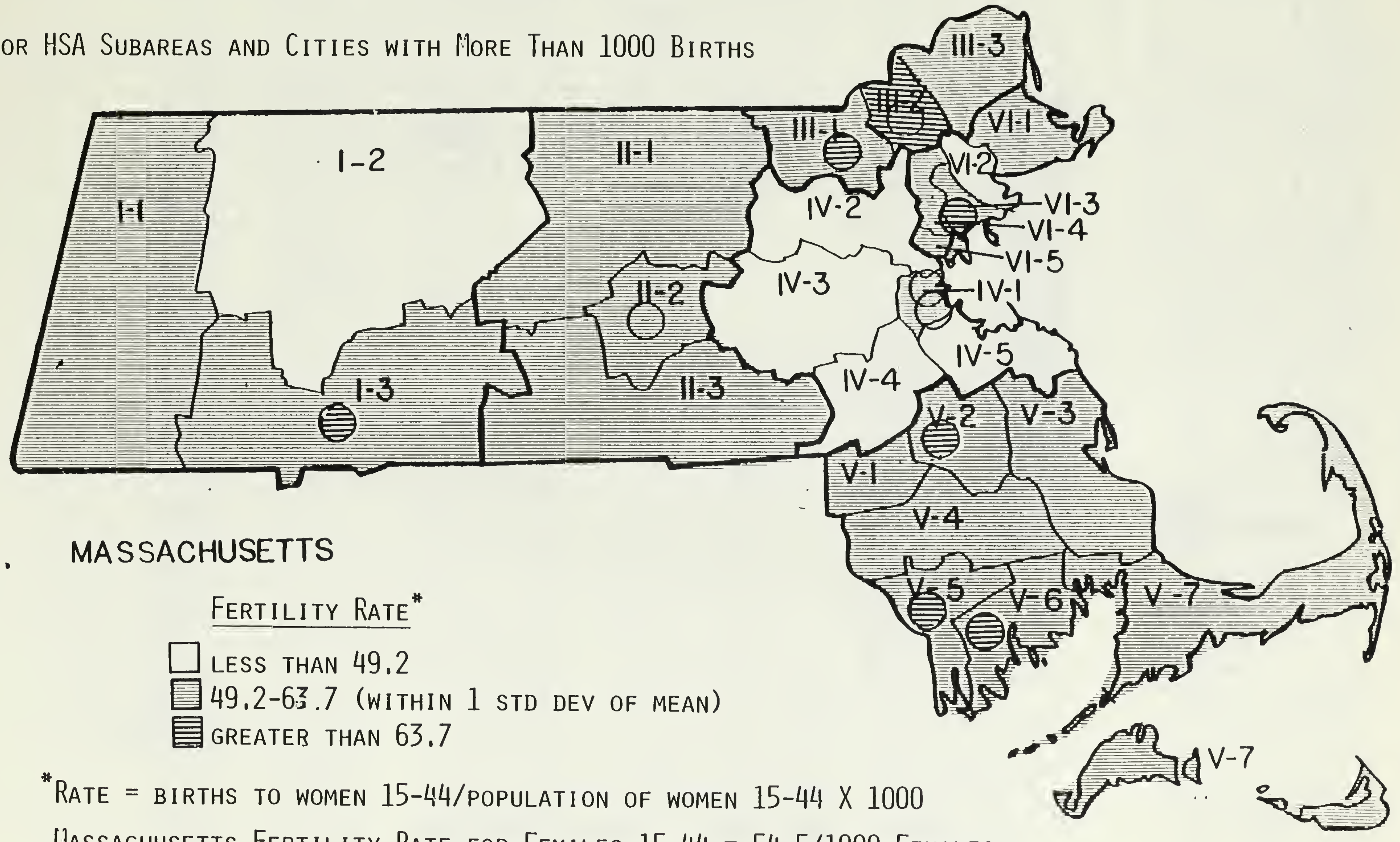
Although fertility rates have declined among all age groups, adolescent pregnancy is still a source of concern. Teenagers are at high risk for adverse pregnancy outcomes. Complications of pregnancy and delivery, low birthweight (LBW), and infant mortality are associated with poor nutrition, smoking, substance abuse, and inadequate prenatal care. Pregnant teenagers, as a group, have one or more of these characteristics with predictably poor outcomes for the newborn and the mother. Low birthweight is twice as common among children born to teenage mothers as it is among children born to older women. In 1984, the overall proportion of LBW births was 5.9% but 8.9% of births to women under age 20 and 10.9% of births to women under age 18 were of low birthweight.

Minority populations consistently have teenage birth rates about double those of the total population and triple the rates to white mothers in some areas of the state. Although the actual number of teen births to whites is larger than to blacks, the proportion of births to blacks under age 18 was over three times that for whites (8.5 vs. 2.3) and for the 18-19 year olds, the proportion was two times greater for blacks than for whites (11.5 vs. 5.3). Proportionately more Hispanic mothers gave birth at younger ages than either blacks or whites; 10.5% were births to Hispanic mothers under age 18 and 14.6% were to women 18-19 years old. (Figure 6)

Figure 5.

FERTILITY RATES FOR FEMALES AGE 15-44* - 1981

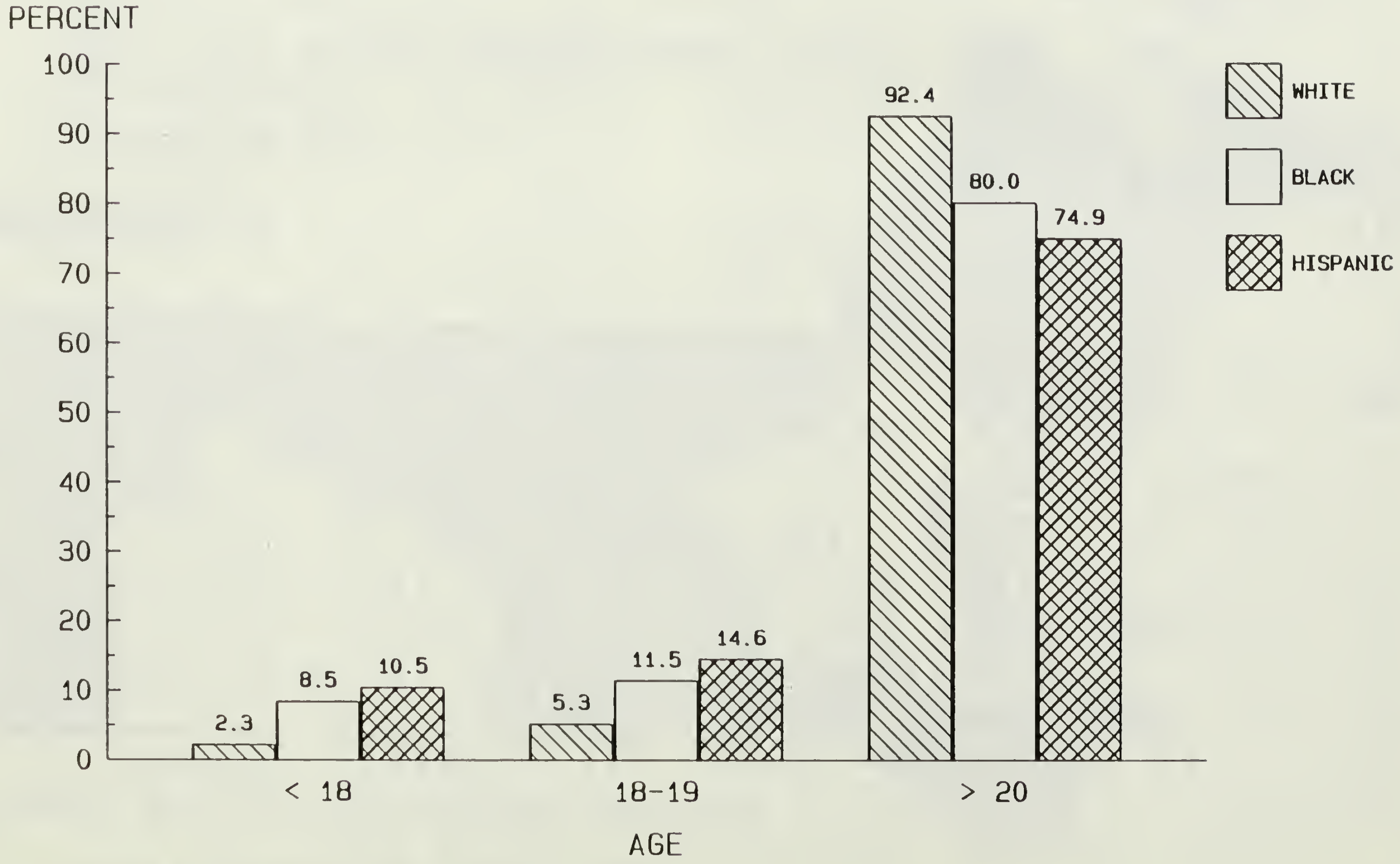
FOR HSA SUBAREAS AND CITIES WITH MORE THAN 1000 BIRTHS



*RATE = BIRTHS TO WOMEN 15-44/POPULATION OF WOMEN 15-44 X 1000

MASSACHUSETTS FERTILITY RATE FOR FEMALES 15-44 = 54.5/1000 FEMALES

FIGURE 6



PROPORTION OF LIVE BIRTHS
BY MATERNAL AGE AND RACE
MASSACHUSETTS 1984

DATA SOURCE: DIVISION OF HEALTH STATISTICS AND
RESEARCH, DPH

Five HSA subareas (HSA I-3, III-2, IV-1, V-5, and V-6) have teenage fertility rates greater than one standard deviation above the state mean (Figure 7). The lowest rates are found in the suburbs of Boston. Urban areas characteristically have high rates of teen births as well. Fifteen of the 25 cities with the largest child population have teenage fertility rates higher than the state figure (Table 4). In some cities, such as Lawrence and Holyoke with 1980 teenage fertility rates of 48.1 and 44.7 respectively, the rates approach the Massachusetts overall fertility rate of 53.5/1000 for women aged 15-44.

Poverty

Individuals and families whose incomes are at or near the poverty line are at greater risk of maternal and child health problems. They often lack the resources to purchase medical care, food for adequate nutrition, and safe housing. Of increased concern are individuals above the poverty line but below 200% of that line (working poor and the recently unemployed). These individuals often do not have private health insurance and may be ineligible for Medicaid. Medical care for them becomes a luxury they cannot afford, affecting their ability to seek preventive care.

It is estimated that 112,800 children under the age of 5 are living below 200% of the federal poverty line. Of these, slightly less than half (52,535) are below 100% of the poverty line. Over a quarter of all children in Massachusetts under age five are living in or near poverty. In 8 out of 26 HSA subareas (HSA I-3, II-2, III-2, V-5, V-6, V-7, IV-1, and VI-3) more than 38% of all children under age 5 are living below 200% of the poverty line (Figure 8). The lowest levels of poverty are found in the affluent suburbs around Boston. In addition, the 1980 census indicated that 140,277 children aged 5 to 17 are living below the poverty line.

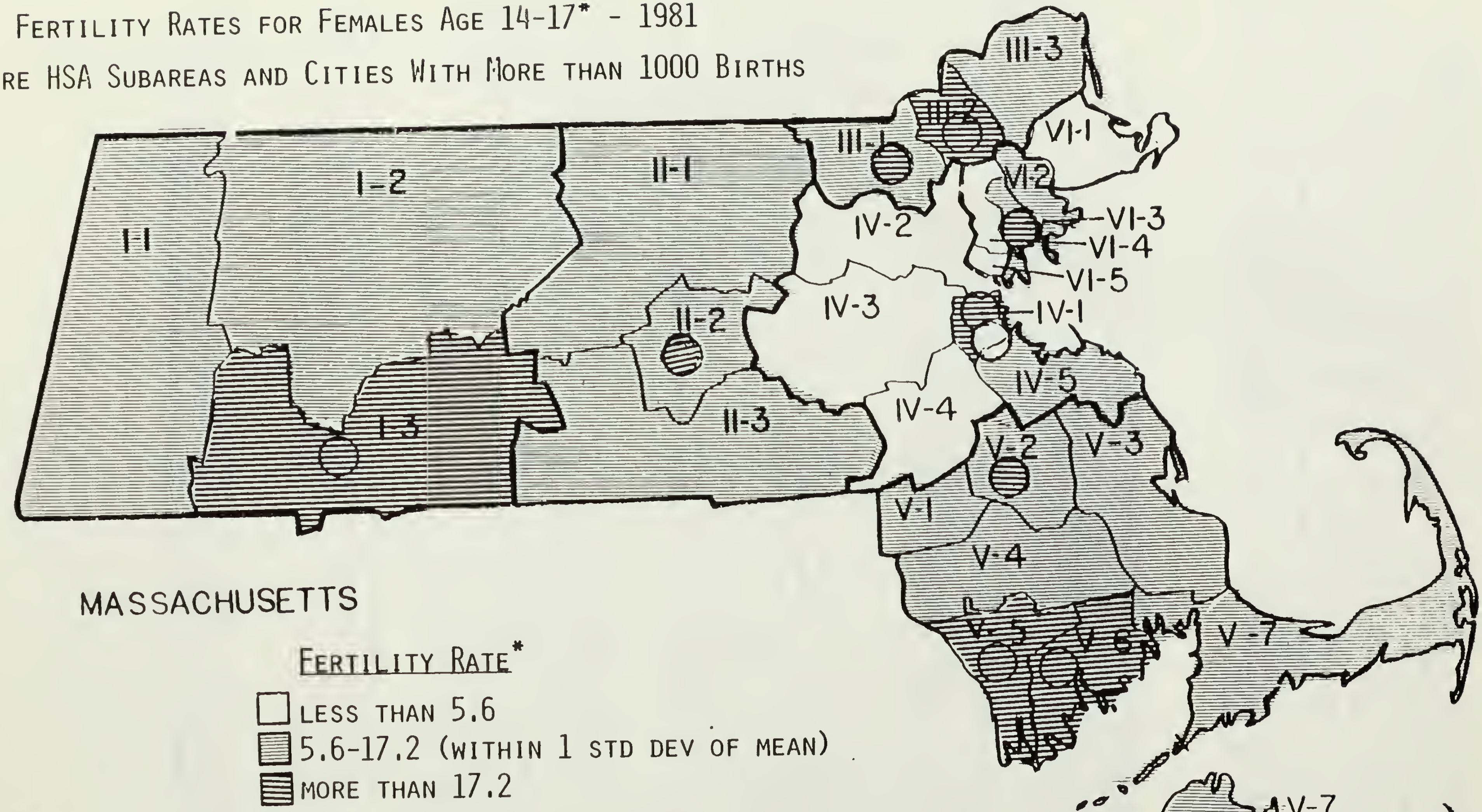
Urban areas have very high concentrations of poor and near-poor populations. Nineteen of the 25 cities with the largest child populations have a larger percentage of children below 200% of the poverty line than the state figure (Table 5). In Holyoke, Boston, Lawrence, Springfield, and New Bedford, more than half the children are below 200% of poverty. In these same five cities, there are 18,419 children below poverty. This represents 35% of all the children below 100% of the poverty line in the state.

Since 1980, the Commonwealth's low income population has become increasingly young, female and minority. In 1983, the poverty rate among blacks and hispanics was five times the rate for whites. The rate of childhood poverty in the state grew from 8.8% in 1970 to 13.7% in 1983.

The number of poor women in Massachusetts is more than double the number of poor men. More than two-thirds of all poor persons in the state are women. The situation is more serious among female

Figure 7

FERTILITY RATES FOR FEMALES AGE 14-17* - 1981
FORE HSA SUBAREAS AND CITIES WITH MORE THAN 1000 BIRTHS



*RATE = BIRTHS TO TEENS 14-17/TEEN POPULATION 14-17 X 1000

MASSACHUSETTS FERTILITY RATE FOR TEENS =12.0 /1000 TEENS

Table 4

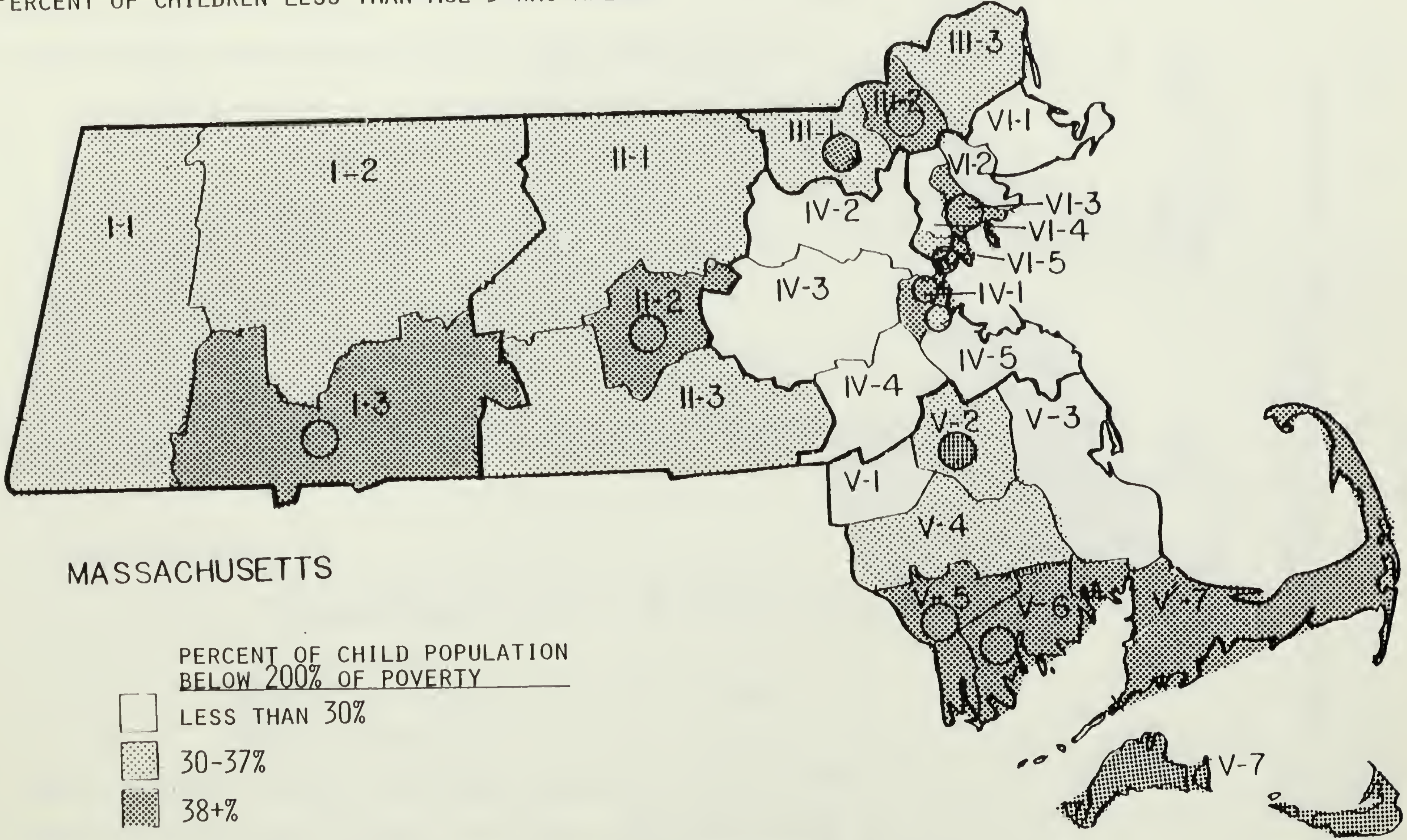
FERTILITY RATES

FOR THE 25 CITIES WITH THE LARGEST CHILD POPULATIONS LESS THAN AGE 5 IN MASSACHUSETTS - 1980

City	AGE 15-44 Fertility Rate	AGE 15-44 Number Births	AGE 14-17 Fertility Rate	AGE 14-17 Number Births
Lawrence	96.5	1,308	48.1	99
Holyoke	80.0	739	44.7	73
Lowell	75.5	1,590	32.7	105
Plymouth	73.0	594	11.1	13
Lynn	71.9	1,212	24.7	65
Haverhill	70.7	735	22.9	38
Fall River	69.9	1,321	19.5	59
Springfield	69.5	2,420	37.9	202
New Bedford	68.9	1,403	22.4	71
Brockton	67.7	1,509	19.7	73
Taunton	65.6	669	14.3	23
Chicopee	63.8	762	16.4	31
Worcester	60.8	2,213	27.1	135
Pittsfield	60.5	680	18.6	37
Fitchburg	57.5	545	18.0	25
Malden	52.1	634	4.7	8
Boston	50.8	7,671	27.2	454
Quincy	48.9	958	4.1	11
Medford	47.0	642	2.4	5
Weymouth	47.6	625	5.6	12
Somerville	46.1	931	6.2	14
Framingham	44.9	751	5.7	13
Waltham	41.7	623	9.5	16
Newton	36.6	781	2.6	7
Cambridge	34.2	967	11.5	21
MASSACHUSETTS	53.5	72,591	12.2	2,471

Figure 8.

PERCENT OF CHILDREN LESS THAN AGE 5 WHO ARE ESTIMATED TO BE BELOW 200% OF POVERTY - 1980



52,100 CHILDREN LESS THAN AGE 5 ARE BELOW POVERTY

APPROXIMATELY 60,700 CHILDREN LESS THAN AGE 5 ARE BETWEEN 100% AND 200% OF POVERTY

112,800 CHILDREN LESS THAN AGE 5 ARE BELOW 200% OF POVERTY

Table 5

CHILDREN LESS THAN 5 BELOW 100% AND BELOW 200% OF POVERTY

For the 25 Cities with the largest Child Populations in Massachusetts

1980

City/Town	Children Below 100% Of Poverty Number	Children Below 100% Of Poverty Percent	Children Below 200% Of Poverty Estimated No.	Children Below 200% Of Poverty Percent
Holyoke	1,301	41.0	1,999	62.9
Boston	10,290	34.2	17,495	58.1
Lawrence	1,725	32.6	2,992	56.5
Springfield	3,254	30.9	5,618	53.3
New Bedford	1,849	27.2	3,664	53.9
Lynn	1,341	26.8	2,427	48.4
Worcester	2,461	25.7	4,513	47.1
Fitchburg	649	25.6	1,207	47.6
Fall River	1,536	24.3	3,437	54.5
Lowell	1,542	22.3	3,063	44.3
Pittsfield	706	22.3	1,351	42.7
Haverhill	669	21.5	1,326	42.6
Cambridge	840	21.4	1,709	43.5
Brockton	1,481	21.2	2,972	42.5
Somerville	756	18.9	1,667	41.8
Taunton	547	17.8	1,176	38.3
Quincy	624	16.3	1,282	33.4
Chicopee	538	16.2	1,219	36.6
Malden	436	15.0	1,004	34.5
Waltham	369	13.4	770	29.0
Medford	369	13.4	809	29.3
Weymouth	361	12.5	803	27.8
Framingham	371	10.8	774	22.6
Plymouth	303	10.2	898	30.1
Newton	194	5.2	548	14.8
MASSACHUSETTS	52,119	15.5	112,798	33.5

headed families, with 60% of all poor families headed by women. A family headed by a female is four times more likely to be poor relative to all families.

National trends show a decline in poverty among the elderly and an increase in poverty among children over the past two decades. A report by the Congressional Budget Office in 1983 suggested that more children are presently living in or near poverty than at any other time in the past 15 years. The Children's Defense Fund also reports that on a national level, three fourths of the growth in the poverty population between 1979 and 1983 occurred among children and adults who have dependent children in their households.

Minority Groups

Maternal and child health status among minority populations is poorer than that of the general population, in large part due to restrictions on access to health care because of cultural, racial and economic barriers. While much of the difference in health status between whites and minorities can be explained by economic variables, for some health problems, such as lead poisoning, minorities experience a higher incidence regardless of income level. The largest minority groups in Massachusetts are blacks and Hispanics. Their distribution statewide is considerably different. Both groups tend to be heavily concentrated in urban areas (Figure 9). The majority of black children live in the eastern part of the state, with the largest number in Boston (Table 6). Hispanic children are more heavily concentrated in the central and western part of the state than are blacks (Table 7). Springfield, Holyoke, and Worcester all have large Hispanic populations.

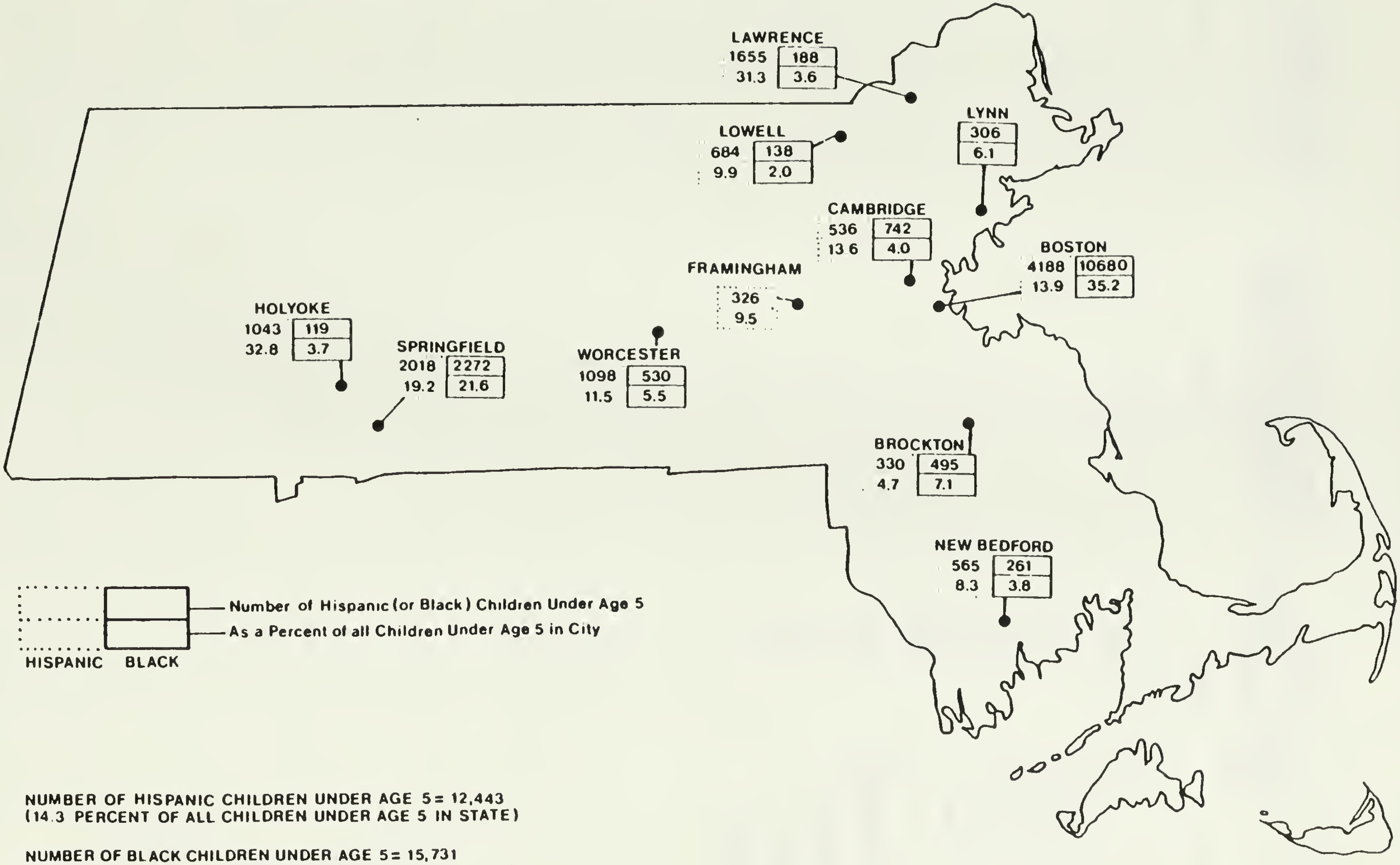
The third largest minority group in Massachusetts is the Chinese. The 1980 census estimated that there were 1,724 Chinese children under age five and 5,599 age 5 through 19. Almost half of this population resides in Boston with an additional 15% residing in the surrounding communities of Cambridge, Newton and Brookline.

Refugee populations have been growing steadily in Massachusetts, particularly since 1980. According to the Massachusetts Office of Refugee Resettlement there were 24,470 refugees initially resettled in Massachusetts in FFY 1985, compared to the 2,500 reportedly in FFY 1979. The majority of these refugees are Southeast Asian; 89% of refugee arrivals in the state in 1984 were from Kampuchea, Vietnam and Laos. 15,250 Southeast Asians reside in the greater Boston area. The Northeast has the second largest concentration, with 9,810 refugees. Refugees entering the United States since 1975 have a median age of 20 years. Data on 1984 arrivals in the state, which closely parallels age distribution of all Southeast Asian refugees settled in the country, indicates that 17% are under age five, another 12% are between the ages of 6 and 11, and 15% are between the ages of 12 and 17. 44% of females are between the ages of 18 and 44.

Figure 9

CITIES WITH THE LARGEST POPULATIONS OF BLACK & HISPANIC CHILDREN UNDER AGE 5

Massachusetts 1980



NUMBER OF HISPANIC CHILDREN UNDER AGE 5 = 12,443
(14.3 PERCENT OF ALL CHILDREN UNDER AGE 5 IN STATE)

NUMBER OF BLACK CHILDREN UNDER AGE 5 = 15,731
(17.8 PERCENT OF ALL CHILDREN UNDER AGE 5 IN STATE)

HISPANIC = SPANISH ORIGIN (ANY RACE)

Table 6

TOP 10 CITIES WITH THE LARGEST POPULATION OF BLACK CHILDREN LESS THAN AGE 5 IN MASSACHUSETTS - 1980

	Number Black Children Less Than Age 5	Black Children In City As A % Of All Black Children In State	Black Children In City As A % Of All Children In City
MASSACHUSETTS	18,658	100.00	100.00
1 - Boston	10,680	57.2	35.2
2 - Springfield	2,272	12.2	21.6
3 - Cambridge	742	4.0	18.9
4 - Worcester	530	2.8	5.5
5 - Brockton	495	2.7	7.1
6 - Lynn	306	1.6	6.1
7 - New Bedford	261	1.4	3.8
8 - Lawrence	188	1.0	3.6
9 - Lowell	138	0.7	2.0
10 - Holyoke	119	0.6	3.7
	------	----	----
	15,731	84.3	17.8

Table 7

TOP 10 CITIES WITH THE LARGEST POPULATION OF CHILDREN OF SPANISH ORIGIN LESS THAN AGE 5 IN MASSACHUSETTS - 1980

	# Spanish Origin Children Less Than Age 5	Spanish Origin Children In City As A % Of All Spanish Children In State	Spanish Origin Children As A % Of All Children In City
STATE	17,900	100.0	100.0
1 - Boston	4,188	23.4	13.9
2 - Springfield	2,018	11.3	19.2
3 - Lawrence	1,655	9.2	31.3
4 - Worcester	1,098	6.1	11.5
5 - Holyoke	1,043	5.8	32.8
6 - Lowell	684	3.8	9.9
7 - New Bedford	565	3.2	8.3
8 - Cambridge	536	3.0	13.6
9 - Brockton	330	1.8	4.7
10 - Framingham	326	1.8	9.5
	------	----	----
	12,443	69.5	14.3

The 1983 Massachusetts Nutrition Survey found that Asian children, including refugees, were at particularly high risk for malnutrition; 15.7% had height-for-age levels below the fifth percentile of national norms, and 11.8% had weight-for-height levels below the fifth percentile. The rate of undernutrition was significantly greater for Southeast Asian children than for other racial groups in the sample. Other health problems identified in this population include intestinal parasites, tuberculosis, iron-deficiency anemia, hepatitis B and dental caries.

Southeast Asian refugees come from war-torn countries where poor sanitation, lack of adequate medical care and limited access to food all contributed to poor nutritional status. Once in the United States, many of these refugees live in crowded conditions, have limited financial support and can't rely on familiar foods and traditional methods of procurement of food, such as fishing and gardening.

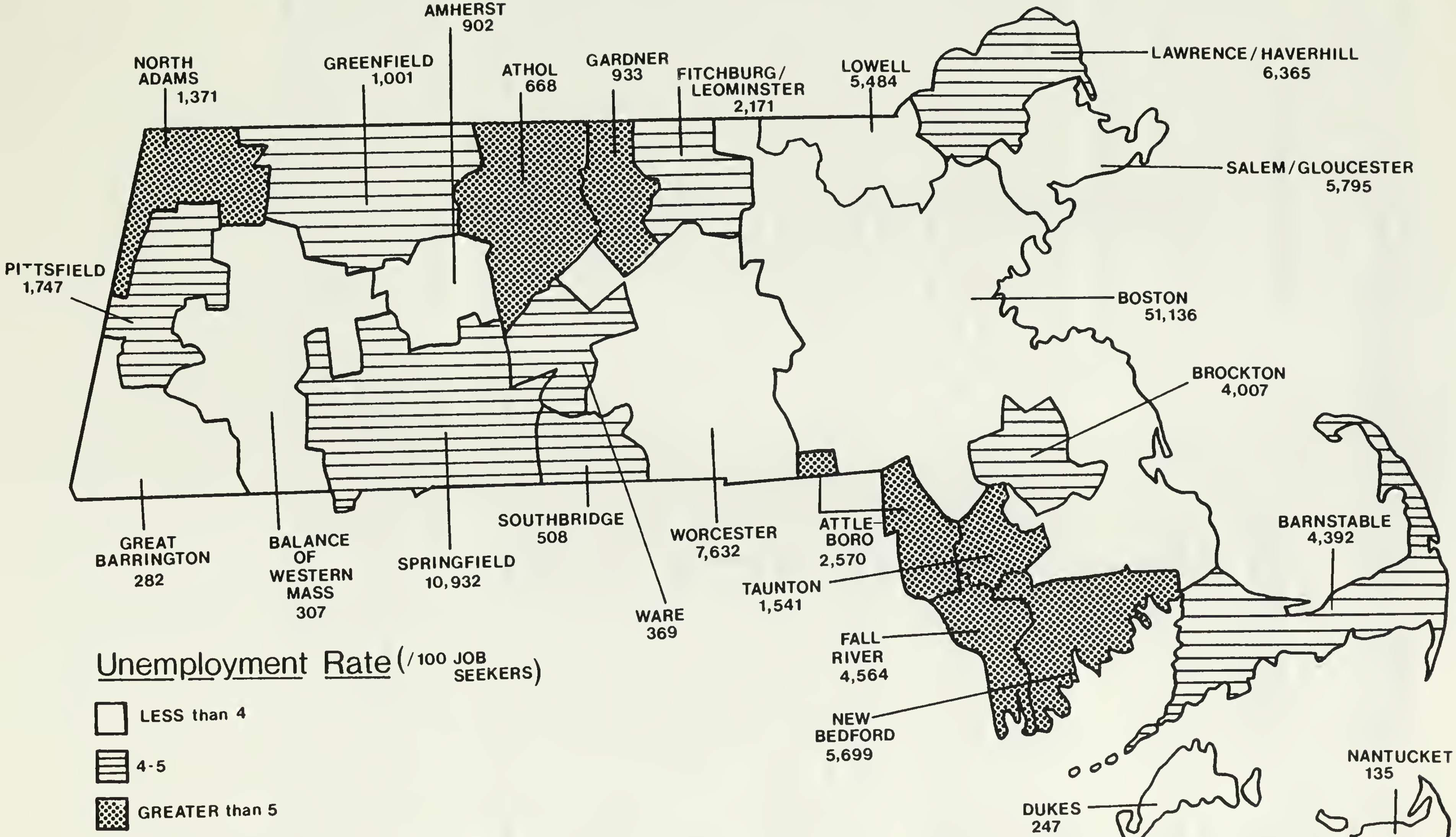
WIC Program providers have found that Southeast Asian women who become pregnant have short interconceptual periods, iron-deficiency anemia and poor weight gain. Many have also experienced miscarriage and one or more of their children may have died. Infants tend to be weaned early from breast to formula and often develop problems of severe dental caries and nutrient deficiencies as a result.

Unemployment

The unemployment rate is important as a population indicator because people out of work are often not eligible for Medicaid and other forms of public assistance. Simultaneously, they are not able to afford payments for health insurance. Sustained high rates of unemployment or large numbers of long-term unemployed people indicate the possibility of future health problems. The ability to afford adequate prenatal care is of particular concern with respect to maternal and child health. Rates of child abuse, and infant and neonatal mortality may be affected as well.

In Massachusetts, the unemployment rate declined from 4.8% (145,000) of the population in 1984 to 3.9% (120,769) in 1985. Unemployment remains relatively high in southeastern (New Bedford, Fall River and Taunton) and western (North Adams, Gardner and Athol) Labor Market Areas of the state (Figure 10). The City of Boston continues to have the highest number of unemployed in the state (Table 8).

FIG. 10 UNEMPLOYMENT RATE BY MASSACHUSETTS LABOR MARKET AREA – 1985



Massachusetts Unemployment Rate = 3.9%
Unemployed = 120,769

Table 8
1985 UNEMPLOYMENT RATE FOR THE 25 CITIES WITH THE LARGEST POPULATIONS OF CHILDREN UNDER AGE 5

City/Town	Unemployment Rate Period Job Seekers	Number Unemployed
New Bedford	7.4	3,772
Fall River	7.2	3,160
Lawrence	6.0	1,926
Taunton	5.9	1,288
Fitchburg	5.9	1,126
Springfield	5.6	3,821
Holyoke	5.5	1,030
Plymouth	5.4	904
Brockton	5.0	2,438
Haverhill	5.0	1,280
Pittsfield	4.7	1,174
Boston	4.6	13,291
Lowell	4.6	2,546
Worcester	4.4	3,419
Chicopee	4.4	1,228
MASSACHUSETTS	3.9	120,769
Lynn	3.8	1,457
Somerville	3.7	1,581
Malden	3.6	1,017
Weymouth	3.6	1,113
Medford	3.4	1,050
Quincy	3.4	1,567
Cambridge	3.3	1,851
Waltham	2.6	859
Newton	2.4	1,156
Framingham	2.3	907

Data Source: Division of Employment Security

B. HEALTH STATUS INDICATORS

Health status indicators include a variety of measures used to assess the significance and location of known health problems. Low-birthweight rates, neonatal and infant mortality rates, and mortality rates for children and youth are reliably reported and widely comparable to national statistics. Other health status indicators discussed in this document are congenital anomaly rates, incidence of lead paint poisoning, nutritional status and childhood injuries. The data for this latter group of health status indicators are either not based on statewide statistics or are believed to be less-reliably reported. Many of these rates can be extrapolated from sample statistics or indirectly estimated.

Infant and Neonatal Mortality

The rates of neonatal and infant mortality are good indicators of maternal and child health problems as well as the overall health of a community or population. The neonatal mortality rate (NMR) measures the number of deaths of infants less than 28 days old per 1,000 live births. The infant mortality rate (IMR) is the number of deaths of infants less than one year old per 1,000 live births.

In 1984, there were 699 infant deaths in Massachusetts, resulting in an IMR of 8.9; 472 of these were neonatal deaths, for a NMR of 6.0 (Table 9). Between 1981 and 1982, infant and neonatal deaths increased significantly. The IMR rose from 9.6 in 1981 to 10.1 in 1982, which was the first increase in nine years and the largest increase in seventeen years. The NMR also rose from 6.9 in 1981 to 7.6 in 1982. The rates for 1983 and 1984 suggest that the overall decline in the state rate as witnessed over the past decades is continuing although at a slower pace. The factors behind the increase in IMR and NMR in 1982 are complex. Because poverty, stress, lack of resources or access to sufficient food and medical care are associated with infant mortality, increased unemployment and cutbacks in federal health and human services in 1982 may have led to the increase. Similarly, recent increased state support for a variety of programs that contribute to improved maternal and child health, as well as overall improvement in the state's economy, may be associated with the apparent continuing decline in the IMR.

The 1984 Massachusetts IMR of 8.9/1000 live births is considerably lower than the provisional, national rate of 10.6/1000 live births and exceeds the Surgeon General's 1990 objective of 9.0 for the nation. However, Massachusetts and especially the U.S., continue to have higher IMRs than many other industrialized nations (Table 10). Sweden, for example, had a 1983 IMR of 7.0 - roughly 22% lower than the Massachusetts rate and 38% below the U.S. rate.

Table 9

RESIDENT INFANT AND NEONATAL DEATHS

1940 - 1984

	DEATHS UNDER 1 YEAR		DEATHS UNDER 28 DAYS	
Year	Number	Per 1,000 Live Births	Number	Per 1,000 Live Births
1940	2,450	37.5	1,655	25.3
1950	2,277	23.8	1,750	18.3
1960	2,492	22.2	1,571	16.4
1970	1,583	16.9	1,231	13.1
1971	1,462	16.8	1,130	13.0
1972	1,164	15.1	896	11.7
1973	1,104	15.3	861	11.9
1974	976	13.9	763	10.9
1975	904	13.3	679	10.0
1976	799	12.1	585	8.9
1977	803	11.8	615	9.1
1978	753	11.0	552	8.1
1979	759	10.8	563	8.0
1980	748	10.3	550	7.6
1981	710	9.6	510	6.9
1982	764	10.1	573	7.6
1983	682	9.0	482	6.3
1984	699	8.9	472	6.0

Table 10

INFANT MORTALITY RATES FOR SELECTED COUNTRIES 1983

Country	IMR
Finland	6.2*
Japan	6.2
Sweden	7.0
Switzerland	7.6
Denmark	7.7*
Norway	7.9*
Netherlands	8.4*
Canada	8.5
France	9.0*
MASSACHUSETTS	9.0
Singapore	9.4
Spain	9.6§
Australia	9.6
Ireland	9.8
Hong Kong	9.9
United Kingdom	10.2*
Federal Republic of Germany	10.3
German Democratic Republic	10.7*
United States	11.2
Austria	11.9*
Italy	12.4*
New Zealand	12.5
Belgium	13.3*
Israel	14.4
Greece	14.9
Czechoslovakia	15.6*

* Provisional
§ Data for 1982

Data source: Wegman, MR: Annual Summary of Vital Statistics - 1984, Pediatrics, 76(6), 1985 pp. 861-871

While the overall IMR has generally been declining, large racial differences persist in both Massachusetts and the U.S. The black IMR (17.0 in 1984) is almost double the white IMR (8.7 in 1984). (See Figure 11.) The disparity in IMR for blacks and other nonwhite populations is paralleled in virtually every other health-status indicator and shows the need for continued improvement in maternal and child health services to these groups.

There is a great deal of geographic variation in infant mortality rates across the state (Figure 12). In the period 1980-84, three HSA subareas (HSA I-3, III-3, and IV-1) had IMRs greater than one standard deviation above the state mean.

Within HSA subareas, cities frequently stand out with much higher rates than the surrounding region. Tables 11 and 12 show the IMR and NMRs for cities with large populations of children. Both five-year averages and single-year rates are shown. Springfield, Holyoke, Boston, and Haverhill have consistently had very high infant and neonatal mortality rates during the past five years. These rates must be interpreted cautiously, as the actual number of deaths is often quite small, and rates may fluctuate a great deal from year to year.

Boston is an area of particular concern since it has more infant deaths than any other city in the Commonwealth. In 1984 the IMR in Boston was 11.7 compared with 8.9 for Massachusetts. Variations in infant mortality within Boston neighborhoods reflect the variations across Massachusetts communities. (Table 13)

Low Birthweight

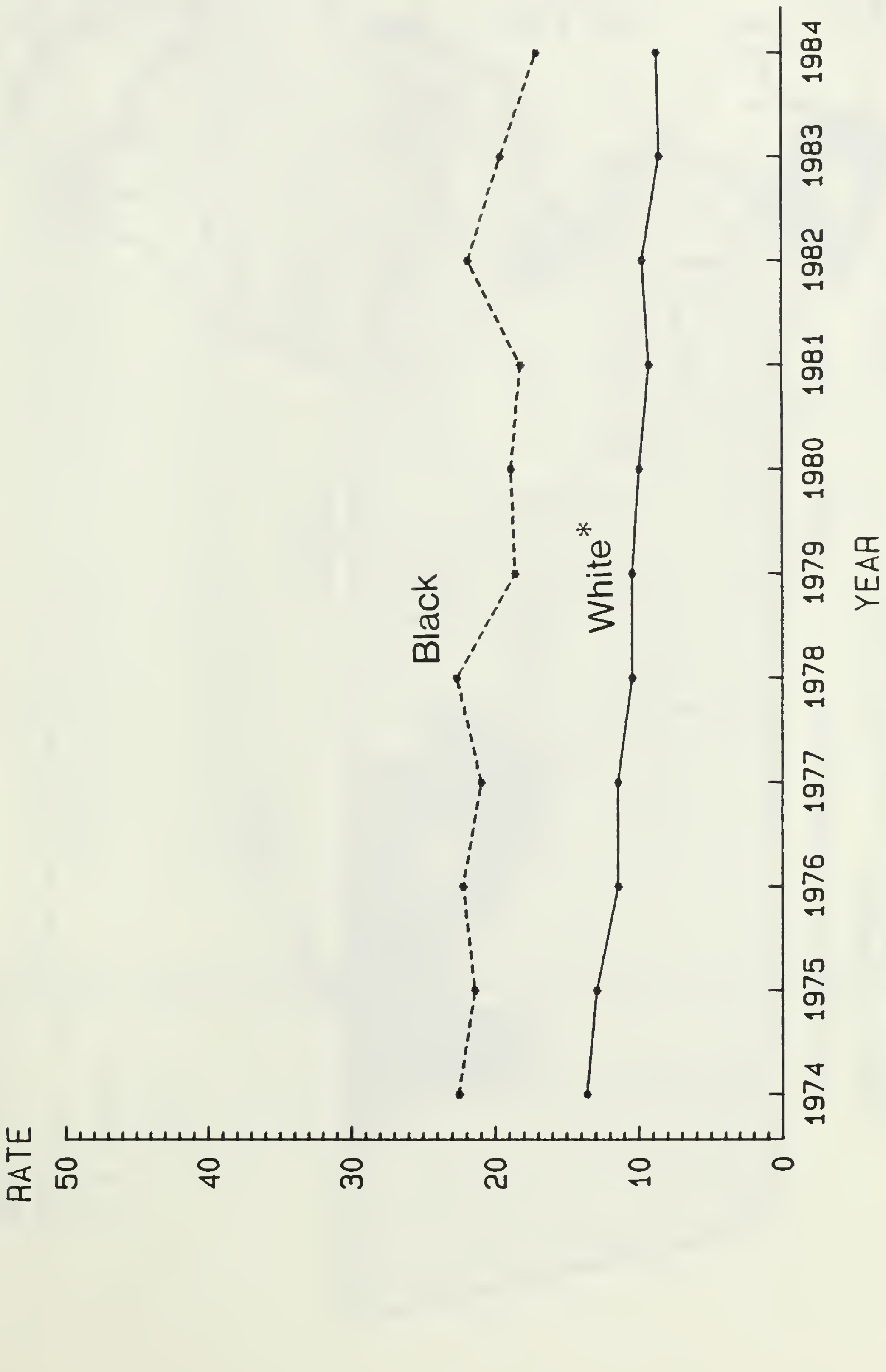
Low birthweight (LBW) is associated with a variety of factors affecting maternal and child health including race, age of mother, smoking, nutritional status, and the adequacy of prenatal care. Low birthweight babies (those less than 2501 grams) have a much higher risk of morbidity and mortality than normal birthweight babies. The neonatal mortality rate in Massachusetts for LBW babies was 81.3 per 1000 live births for the period 1980-84, as compared to 1.5/1000 for normal birthweight (2500-4500 grams) babies. The mortality rate rises dramatically for very low birthweight babies, 388.9 per 1,000 live births under 1500 grams. (See Table 14.)

Low birthweight rates in Massachusetts have declined slowly from 7.4/100 in 1970 to 5.9/100 in 1984 In 1984, there were 4,598 LBW babies. Much of it the result of economic and social conditions. Minorities and the poor are at much higher risk of having LBW babies. There is some variation statewide. (Figure 13)

In the five year period between 1980 and 1984, 11.1% of black mothers delivered LBW babies compared with 8.6% of Hispanic mothers and 5.3% of white mothers.

Figure 11

INFANT MORTALITY RATES BY RACE
MASSACHUSETTS 1974-1984
RATE PER 1000 LIVE BIRTHS



* WHITE INCLUDES HISPANICS

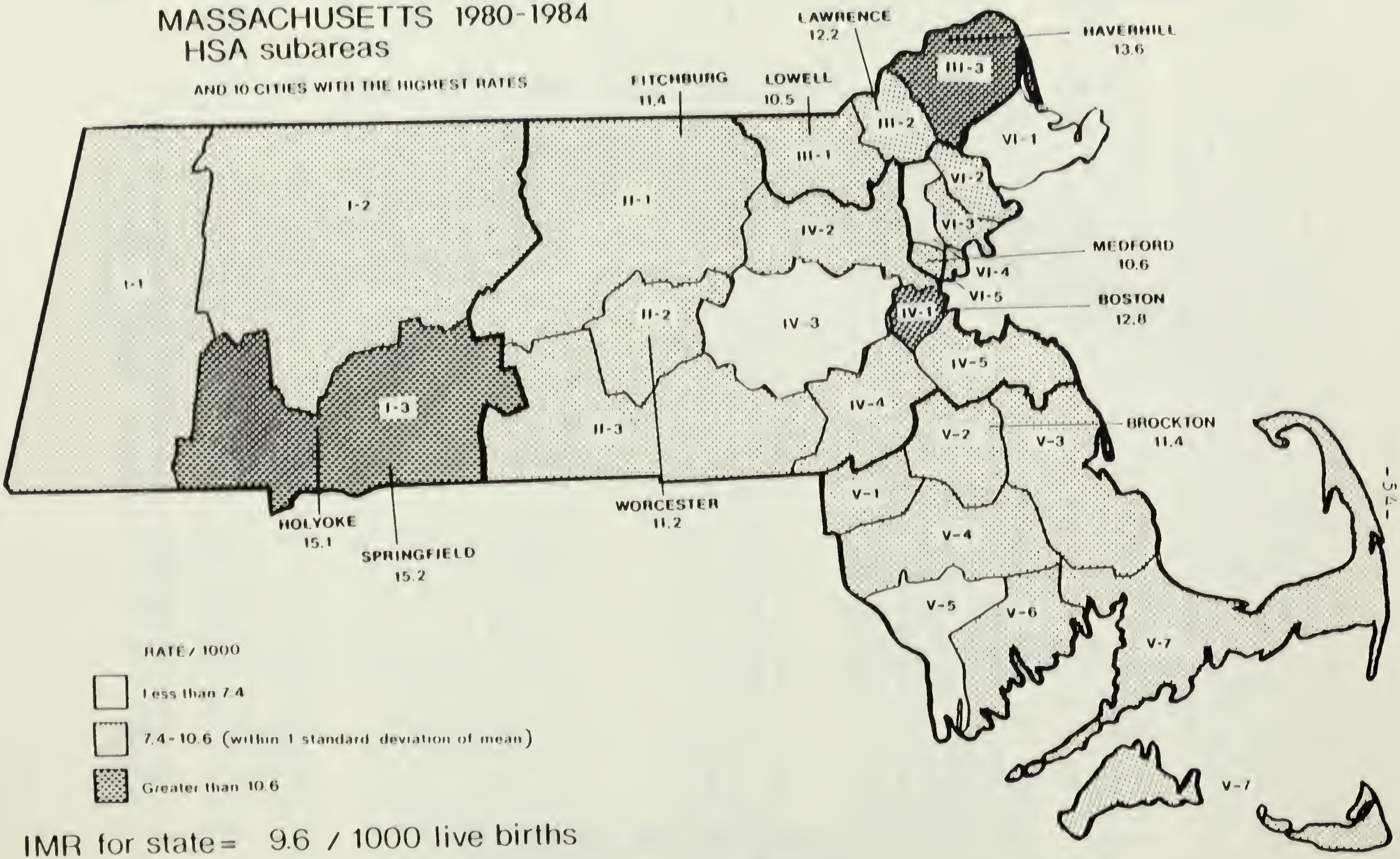
DATA SOURCE: DIVISION OF HEALTH STATISTICS AND RESEARCH, DPH

Figure 12

INFANT MORTALITY RATE

MASSACHUSETTS 1980-1984
HSA subareas

AND 10 CITIES WITH THE HIGHEST RATES



IMR for state = 9.6 / 1000 live births

Data Source: Division of Health Statistics & Research, MDPH

Table 11
INFANT MORTALITY RATE
FOR 25 LARGEST CITIES IN MASSACHUSETTS
(Based on the Number of Births)

	5 YEAR IMR		1 YEAR IMR			NUMBER OF INFANT DEATHS		
City	1980-84	1978-82	1984	1983	1982	1984	1983	1982
Holyoke	15.4	14.8	13.4	13.8	10.5	10	10	8
Springfield	15.3	15.8	13.0	12.1	15.0	34	30	37
Haverhill	13.6	12.6	10.7	21.9	17.5	8	16	13
Boston	12.8	14.5	11.7	11.5	15.8	100	96	132
Lawrence	12.2	12.1	16.1	6.8	16.8	21	9	21
Fitchburg	11.4	12.6	6.8	6.7	15.8	4	4	9
Brockton	11.4	11.3	14.8	10.3	8.2	24	17	13
New Bedford	11.3	11.2	8.1	11.2	14.3	12	16	22
Worcester	11.2	11.8	11.2	11.2	11.2	27	26	26
Medford	10.6	12.0	9.9	4.4	23.2	7	3	15
Chicopee	10.6	10.1	9.2	13.0	12.5	7	9	9
Lowell	10.5	11.9	11.6	10.8	9.2	20	17	15
Quincy	10.0	9.6	14.2	7.7	10.1	14	8	10
Malden	9.7	11.5	7.0	11.0	10.5	5	8	7
MASSACHUSETTS	9.6	10.3	8.9	9.0	10.1	699	682	764
Waltham	9.4	8.1	8.0	10.9	7.8	5	7	5
Cambridge	9.2	9.4	9.3	2.8	7.9	10	9	8
Lynn	9.2	11.9	8.4	9.5	9.9	11	12	13
Framingham	8.7	8.6	9.4	6.7	5.9	7	5	4
Fall River	8.6	10.2	5.1	7.5	9.9	7	10	13
Somerville	7.9	9.0	14.0	9.4	3.0	4	9	3
Pittsfield	7.9	8.9	7.4	8.8	7.5	5	6	5
Taunton	7.6	9.5	9.7	5.9	8.6	7	4	6
Plymouth	7.3	7.0	5.2	10.8	8.5	3	6	5
Weymouth	7.2	6.9	13.3	10.2	3.0	9	7	2
Newton	5.9	6.2	3.7	10.3	4.8	3	9	4

Data Source: Division of Health Statistics and Research, Department of Public Health

Table 12
Neonatal Mortality Rate
For Largest Cities in Massachusetts
(Based on number of births)

City	5 YEAR NMR 1980-84	5 YEAR NMR 1978-82	1 YEAR NMR 1984	1 YEAR NMR 1983	1 YEAR NMR 1982	NUMBER OF NEONATAL DEATHS 1984	NUMBER OF NEONATAL DEATHS 1983	NUMBER OF NEONATAL DEATHS 1982
Springfield	11.5	12.2	9.2	8.4	12.6	24	21	31
Holyoke	11.4	10.3	9.3	12.5	7.9	7	9	6
Medford	9.4	11.0	9.9	1.5	23.2	7	1	15
Haverhill	9.3	8.9	9.3	11.0	12.1	7	8	9
Boston	8.9	10.4	7.7	8.4	11.5	66	70	96
New Bedford	8.7	9.1	3.4	8.4	13.0	5	12	20
Worcester	8.3	9.2	7.9	6.9	8.2	19	16	19
Lawrence	8.0	8.5	9.2	6.0	10.4	12	8	13
Brockton	8.0	8.4	10.5	4.8	7.5	17	8	12
Malden	7.9	9.9	5.6	8.2	7.5	4	6	5
Chicopee	7.1	7.0	5.3	8.7	8.3	4	6	6
Cambridge	7.0	6.9	5.6	2.8	5.9	6	3	6
MASSACHUSETTS	6.9	7.6	6.0	6.4	7.6	472	483	573
Lynn	6.7	8.5	5.3	6.3	9.1	7	8	12
Quincy	6.6	6.4	9.1	5.8	6.0	9	6	6
Waltham	6.6	5.9	6.4	6.2	6.2	4	4	4
Fitchburg	6.4	8.1	1.7	5.0	8.8	1	3	5
Lowell	6.4	7.2	7.0	7.6	4.3	12	12	7
Somerville	6.0	6.6	2.0	8.4	3.0	2	8	3
Framingham	6.0	6.1	5.4	5.4	5.9	4	4	4
Fall River	5.7	6.8	2.9	6.0	5.3	4	8	7
Pittsfield	5.6	7.4	4.4	4.4	5.7	3	3	4
Taunton	4.7	6.5	5.6	3.0	5.7	4	2	4
Weymouth	4.5	5.6	7.4	5.8	3.0	5	4	2
Newton	3.9	5.4	1.2	5.7	3.6	1	5	3
Plymouth	3.8	4.2	3.5	7.2	3.4	2	4	2

Data Source: Division of Health Statistics and Research, Department of Public Health

Table 13

INFANT MORTALITY RATES AND LOW BIRTHWEIGHT RATES BY BOSTON NEIGHBORHOOD

	Infant Mortality Rate 1980-1984	Low Birthweight Rate 1980-1984	Number Births 1984	Number Infant Deaths 1984	Number Births Less Than 2500 Grams - 1984
South Dorchester (901-903,, 916-924)	17.8	10.8	1023	20	112
Roxbury (801-821)	17.7	12.6	1154	19	163
Mattapan/Neponset (1001-1011)	15.5	10.4	1227	15	136
Hyde Park (1401-1404)	15.3	6.8	499	5	33
South Boston (601-614)	11.7	7.1	416	7	32
Jamaica Plain (1201-1207)	11.5	7.9	481	6	27
Boston Proper (101-305)	11.1	6.4	433	1	29
North Dorchester (904-915)	11.0	8.9	698	7	59
South End (701-712)	9.7	8.6	428	5	33
East Boston (501-512)	9.5	6.3	453	5	28
Charlestown (401-408)	9.3	5.6	175	1	12
Brighton/Allston (001-008)	6.5	6.4	693	22	234
West Roxbury (1301-1304)	4.9	3.6	290	1	16
Roslindale (1101-1106)	4.4	6.2	555	1	44
BOSTON	12.8	8.7	8526	100	790
MASSACHUSETTS	9.6	5.9	78,198	699	4598

Data Source: Division of Health Statistics and Research, Department of Public Health

Table 14

DISTRIBUTION OF BIRTHS AND NEONATAL MORTALITY RATE BY BIRTHWEIGHT

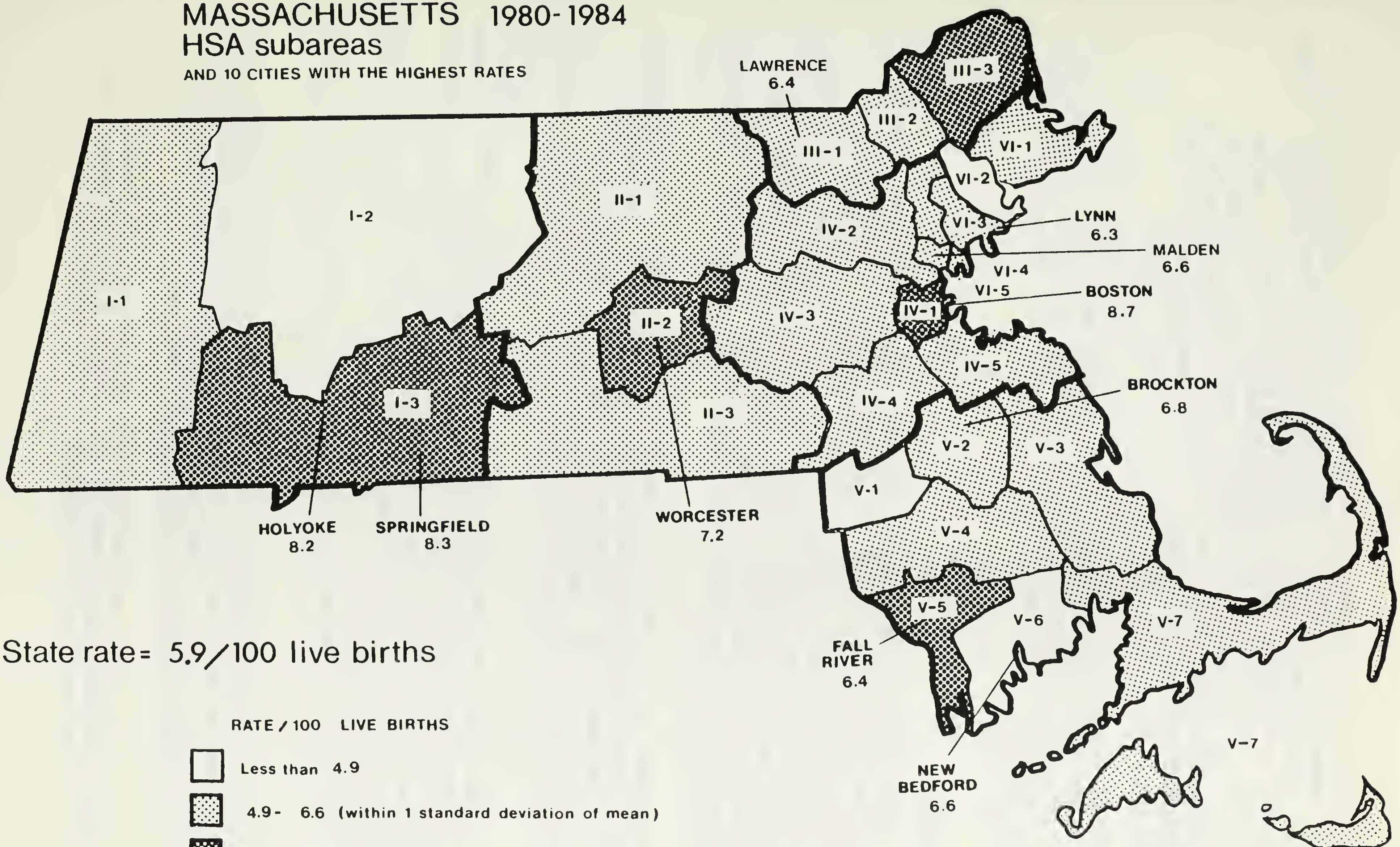
MASSACHUSETTS 1980-84

Birthweight	Proportion Of Births	Neonatal Mortality Rate
< 1500 grams	1.0	388.9
1500-1999	1.1	36.2
2000-2499	3.8	10.6
2500-3999	82.5	1.6
4000-4500	9.5	1.1
> 4500 grams	2.0	2.2
Unknown	0.1	466.5

Data Source: Division of Health Statistics and Research, Department of Public Health

LOW BIRTH WEIGHT RATE
MASSACHUSETTS 1980-1984
HSA subareas

AND 10 CITIES WITH THE HIGHEST RATES



State rate= 5.9/100 live births

RATE / 100 LIVE BIRTHS

- ☐ Less than 4.9
- ▨ 4.9- 6.6 (within 1 standard deviation of mean)
- ■ Greater than 6.6

Data Source; Division of Health Statistics & Research, MDPH

The areas with the highest LBW rates (HSA I-3, II-2, III-3, IV-1 and V-5) generally rank high on other problem indicators as well, such as unemployment rate. The cities with the largest 5-year rates (1980-84) are Boston (8.7), Springfield (8.3), Holyoke (8.2), Worcester (7.2), Brockton (6.9) and New Bedford (6.6). Malden, Lawrence, Lynn, Fall River, Pittsfield, Cambridge, Chicopee, Haverhill, Lowell, Somerville, and Plymouth also have rates in excess of the Massachusetts 5-year low birthweight rate of 5.9 births. (Table 15)

Geographic variations in low birthweight rates are also reflected in Boston neighborhoods. For 1980-1984, the low birthweight rate for Boston was 8.7, exceeding the state rate of 5.9. Several Boston neighborhoods stand out with exceedingly high rates. (Table 13)

Birth Defects

Birth defects are the second leading cause of infant death. Between 1980 and 1984, 23.6% of all infant deaths (birth to one year) in Massachusetts were due to birth defects. Congenital anomalies or birth defects, include both structural malformations and biochemical errors of matabolism. Of all anomalies reported on birth certificates (1978-1982), those of the genital organs and urinary system represented 14.3%; musculoskeletal deformities, 14.1%; cardiovascular disorder, 8.8% and cleft lip/palate accounted for 7.2% of all anomalies.

The majority of congenital anomalies (60%) occur from unknown causes. Only some congenital anomalies are known to be caused by chromosomal abnormalities, exposure to infection or environmental teratogens. Increasingly, environmental factors have been recognized as important factors associated with adverse reproductive outcomes.

Some drugs taken during pregnancy have also been linked to congenital anomalies. Well-known examples include limb malformations from pregnant women taking thalidomide, reproductive tract malformations in daughters whose mothers took DES (diethystilbestrol) during pregnancy, and the fetal alcohol syndrome and its associated anomalies.

Injuries

Each year in Massachusetts there are 380,000 injuries to children and adolescents serious enough to require emergency room treatment or hospital care. Accidents are the leading cause of disability and death among children over the age of 1.

Rates of injury are not uniform by age or injury cause. For example, falls are most problematic for infants and preschoolers, while sports injuries are the leading cause of injury among

Table 15
Low Birthweight Rate
For the 25 Cities With the Largest Child Population
Massachusetts

City	5 YEAR LBW 1980-84	5 YEAR LBW 1978-82	1 YEAR LBW 1984	1 YEAR LBW 1983	1 YEAR LBW 1982	NUMBER OF LOW BIRTHWEIGHT BABIES 1984	NUMBER OF LOW BIRTHWEIGHT BABIES 1983	NUMBER OF LOW BIRTHWEIGHT BABIES 1982
Boston	8.7	8.7	9.3	8.7	8.5	790	727	711
Springfield	8.3	8.0	8.0	8.9	8.1	210	222	199
Holyoke	8.2	8.2	7.9	8.3	7.4	59	60	56
Worcester	7.2	7.4	7.4	7.4	7.8	177	172	181
Brockton	6.9	7.0	7.3	6.6	5.8	118	109	92
New Bedford	6.6	7.0	6.4	6.9	7.2	95	98	111
Malden	6.6	6.5	5.1	6.9	7.5	37	50	50
Cambridge	6.6	6.3	6.7	6.5	6.6	72	69	67
Fall River	6.4	6.8	7.0	5.1	5.9	97	68	78
Lawrence	6.4	6.6	6.0	6.3	7.6	78	83	95
Lynn	6.3	6.9	6.1	5.2	7.2	81	67	95
Chicopee	6.3	6.4	7.1	5.3	5.7	54	37	41
Somerville	6.2	6.1	6.5	4.9	4.5	65	47	45
Lowell	6.1	6.5	5.9	5.3	6.6	102	84	107
Pittsfield	6.0	6.8	5.4	7.0	4.8	37	48	32
Haverhill	6.0	6.8	4.7	5.1	5.9	35	37	44
Plymouth	6.0	5.3	7.5	5.2	6.8	43	39	40
Taunton	5.9	6.8	4.4	5.9	6.7	32	40	47
Massachusetts	5.9	6.1	5.9	5.9	5.9	4598	4461	4447
Quincy	5.7	5.4	6.5	5.7	3.7	64	59	37
Fitchburg	5.6	6.4	5.6	4.9	4.6	33	29	26
Medford	5.6	5.9	6.2	3.5	5.9	44	24	38
Waltham	5.5	6.0	4.8	4.5	5.8	30	29	37
Framingham	5.4	6.2	4.6	5.6	4.1	34	42	28
Weymouth	5.1	4.7	6.2	5.8	5.7	42	40	38
Newton	5.0	4.9	5.2	4.3	5.4	43	38	45

Data Source: Division of Health Statistics and Research, Department of Public Health

teenagers. (Table 16) In general, injury rates increase with age (Figure 14) and peak around ages 16 and 17. Males are more likely to be injured than females, and this gender gap increases with increasing age.

Overall, only about 3% of all injuries are serious enough to require hospitalization (Table 16). But, there is considerable variation by cause of injury. Motor vehicle related injuries, including bicycle and pedestrian injuries, burns, drownings, and electrocutions show a high percentage of admissions. In comparison, fall and sports injuries demonstrate a relatively lower percentage of admissions, although overall their rates of injury are high. Again, motor vehicle related accidents, burns, electrocutions and drownings account for most fatalities.

Overall, open wounds and contusions are the primary outcomes of an injury. However, head injuries are very common for certain injury causes, such as motor vehicle related and fall injuries. Head injuries also tend to be more severe in younger children and require a longer hospital stay and more after care.

Childhood Mortality

Mortality rates among children are high at birth, then fall rapidly. Of the 1,422 childhood deaths under age 20 in 1980, 748 of these were among infants. Mortality rates begin to rise again significantly in the early teenage years. The 1985 Child Mortality Study being conducted by the Division has examined cause of death among all children under age 19 who died during the period 1980-1984 (Figure 15). Most deaths below the age of 1 are the result of congenital defects, Sudden Infant Death Syndrome (SIDS), and a variety of perinatal conditions such as complications of delivery. After age 1, accidents are the leading cause of death for all ages. Motor vehicle accidents (including bicycle, pedestrian and occupant related), in particular, are a major cause of death at ages beyond 1 year.

Among general medical causes of death, cystic fibrosis, cardiac arrest, pneumonia and muscular dystrophy are the most common specific causes of death for children over age one. Together with undiagnosed conditions, they account for only 26% of the deaths in this category. For deaths of children over the age of one, motor vehicle accidents clearly emerge as the leading cause of death followed by general medical causes and other accidents. Deaths from fires, drownings and gunshot wounds are the leading causes responsible for 38% of deaths due to accidents. After neoplasms (cancer), the next most common causes of death are those originating in infancy, followed by homicides and suicides which are nearly equal in total numbers.

Table 16

ESTIMATES OF STATEWIDE INJURY FREQUENCY, EMERGENCY ROOM VISITS AND HOSPITALIZATIONS

FIVE MOST COMMON INJURY TYPES BY AGE GROUP

Injury Type	Rate/10,000 Population	Number Of Injuries	Number Seen In Emergency Room	Number* Hospitalized
0-5 Years old - 1980 Population - 404,764 children				
Falls	797.7	32,300	31,100	1,100
Struck by Object	275.2	11,100	11,100	10
Cut by Object	149.7	6,100	6,000	100
Poison	81.4	3,300	3,000	300
Burns	70.1	2,800	2,400	200
Total Injury Rate	1,726.0	70,000		
6-12 Years old - 1980 Population - 576,555 children				
Falls	553.8	32,000	31,000	1,000
Struck by Object	394.8	22,800	22,500	300
Sports	336.8	19,400	18,700	600
Cut by Object	275.6	15,900	15,800	100
Pedal Cycle	122.8	7,100	6,500	500
Total Injury Rate	2,004.0	115,500		
13-19 Years old - 1980 Population - 740,201 children				
Sports	689.7	51,100	50,000	1,500
Struck by Object	409.3	30,300	30,000	400
Cut by Object	384.1	28,400	28,000	400
Falls	348.9	25,800	25,300	500
Motor Vehicle-Occup.	195.5	14,500	13,000	1,500
Total Injury Rate	2,659.0	196,800		
OVERALL INJURY RATE	2,220.3			

TOTAL NUMBER OF INJURIES IN MASSACHUSETTS ANNUALLY = 380,000

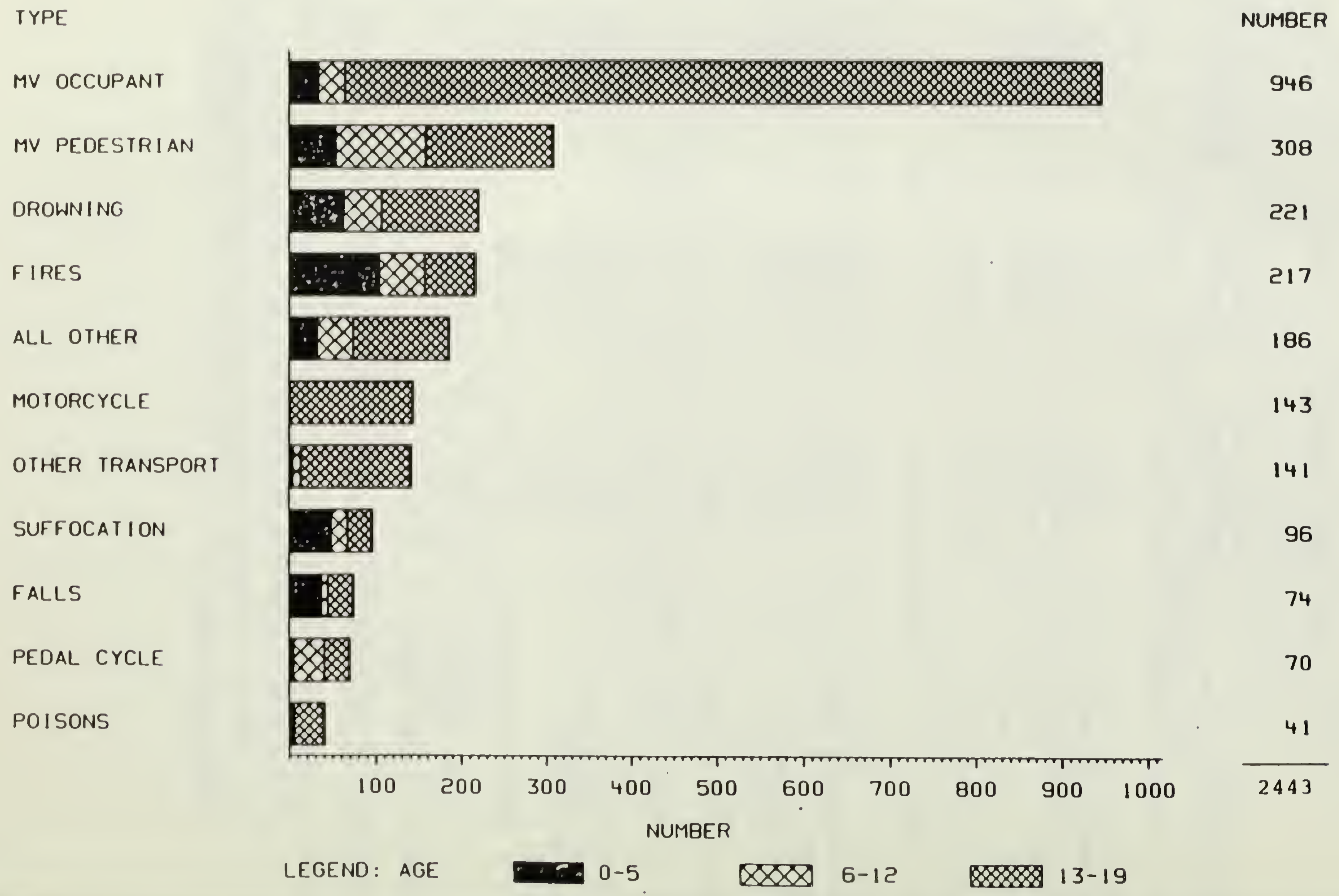
NOTE: Estimates projected from SCIPP data and 1980 U.S. Census. All numbers rounded to nearest 10 or 100.

* Because of rounding, Numbers Hospitalized and Numbers Seen In Emergency Rooms do not always equal the total number of injuries.

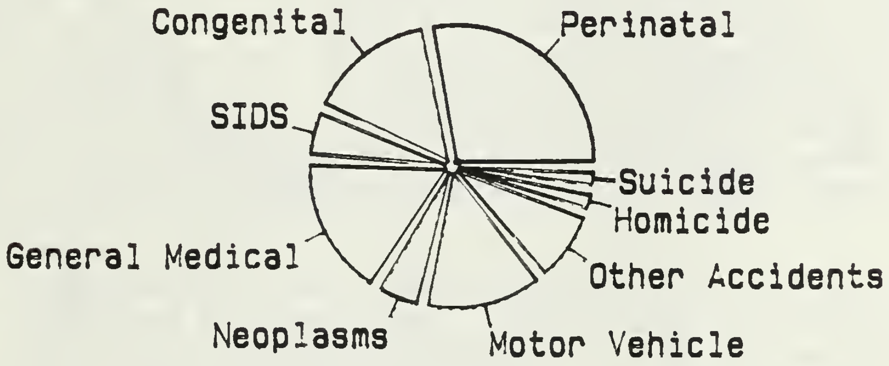
Figure 14

ACCIDENTAL DEATHS – SELECTED CAUSES

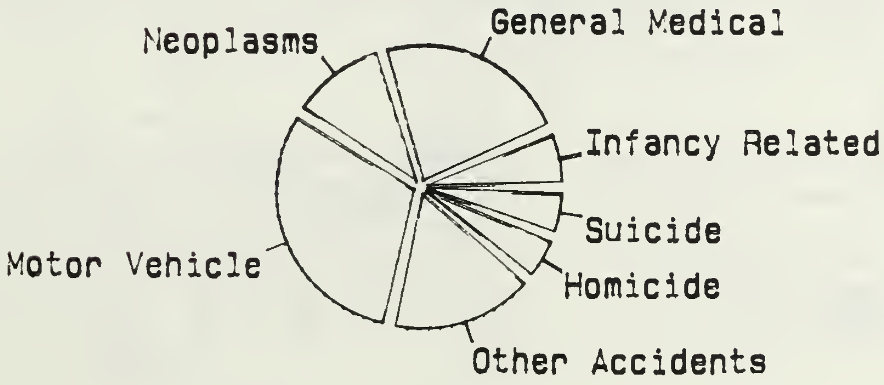
CHILDREN 0-19 YEARS OLD
MASSACHUSETTS RESIDENTS: 1975-1980 AGGREGATED



Causes of Death
Massachusetts Resident Children



Children 0 -19



Children 1 - 19

Figure 15

Lead Poisoning

Lead poisoning is caused primarily by the ingestion of lead paint. There are approximately 371,000 children in the high-risk group of six months through 5 years of age. In January, 1985, the Centers for Disease Control recommended lowering the acceptable blood lead level from 30 to 25 mcg/dl and the erythrocyte protoporphyrin (EP) level from 50 to 35 mcg/dl. Under the new guidelines the number of children considered to be at risk for lead poisoning is estimated between 8,000 and 12,000. (Figure 16)

The areas of highest risk are older urban communities where much of the housing predates 1950. Table 17 shows the amount of housing predating 1950 in the 25 cities with the largest childhood populations. In the state as a whole, 1.2 million housing units are likely to contain lead paint. In most of the cities shown, more than two-thirds of all housing units are old. Table 17 also indicates the number of pre-1950 renter-occupied housing units, which are less likely than owner-occupied units to be well maintained.

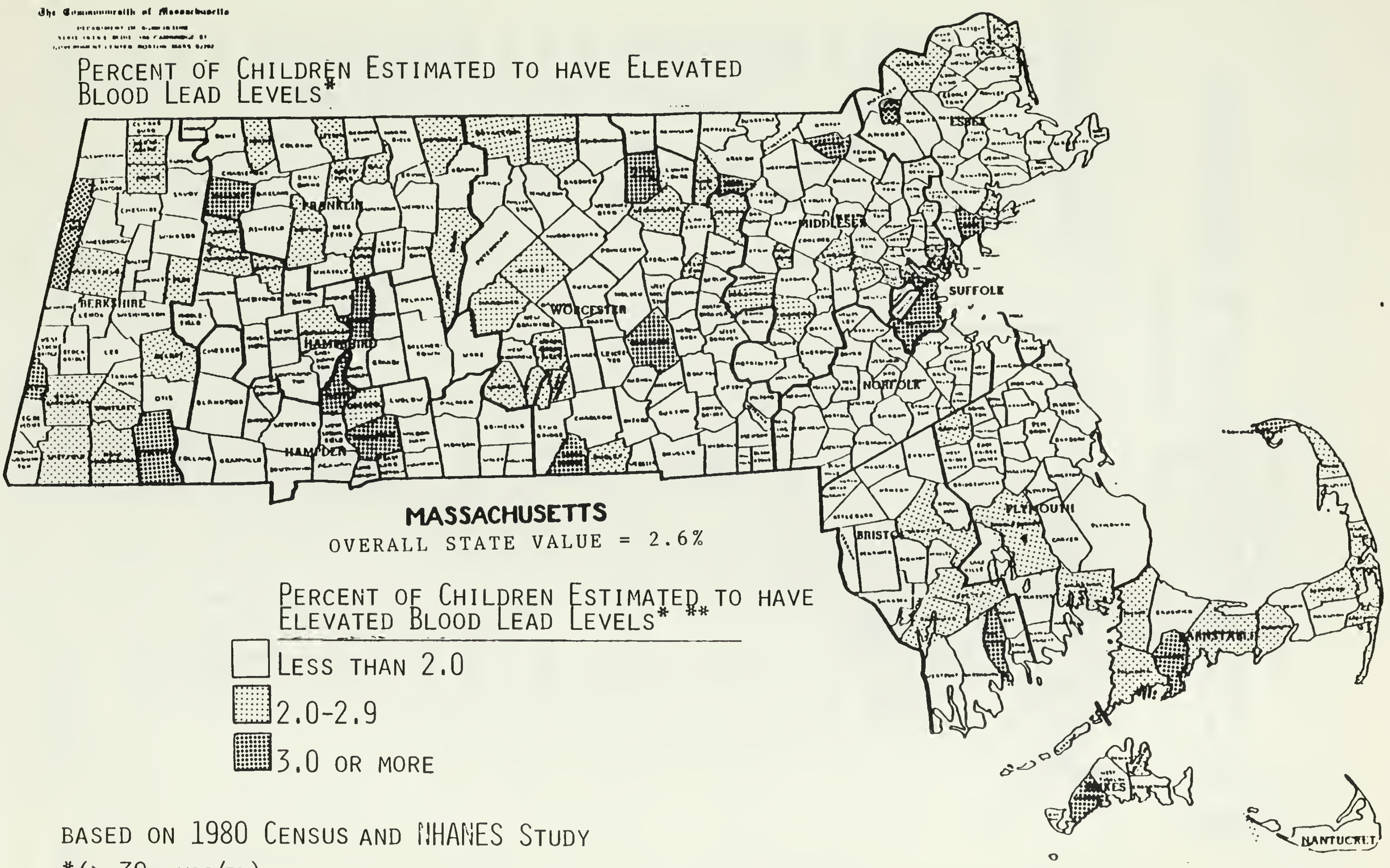
Minorities and the poor are at higher risk of exposure to lead hazards than the general population. The poor are generally unable to afford modern housing and are more apt to rent older units which may be less well maintained than modern housing units. Black children are at higher risk for lead poisoning, independent of family income level and level of urbanization.

Nutritional Status

While the Massachusetts MCH program has attempted to address needs related to nutritional health through a number of programs, until recently, there was little data to indicate the extent of need for services to improve nutritional status. However, the results of the 1983 Massachusetts Nutrition Survey (MNS) provided sound evidence that chronic malnutrition is a significant health problem among poor, young Massachusetts children.

The MNS collected information on 1,429 children aged six months to six years who receive care at community health facilities serving 20 cities and towns with high proportions of poor individuals (Figure 17), thus focusing on a population that is particularly vulnerable to nutritional insults. Height and weight measurements were made, recent laboratory blood test data obtained and interviews with families were conducted in order to describe the socioeconomic characteristics of children studied.

PERCENT OF CHILDREN ESTIMATED TO HAVE ELEVATED BLOOD LEAD LEVELS*



MASSACHUSETTS

OVERALL STATE VALUE = 2.6%

PERCENT OF CHILDREN ESTIMATED TO HAVE ELEVATED BLOOD LEAD LEVELS* **

☐ LESS THAN 2.0

▨ 2.0-2.9

■ 3.0 OR MORE

BASED ON 1980 CENSUS AND NHANES STUDY

*(≥ 30 MCG/DL)

** CDC HAS RECENTLY ISSUED NEW GUIDELINES OF ≥25 MCG/DL FOR BLOOD LEAD LEVELS AND ≥35MCG/DL FOR EP LEVELS

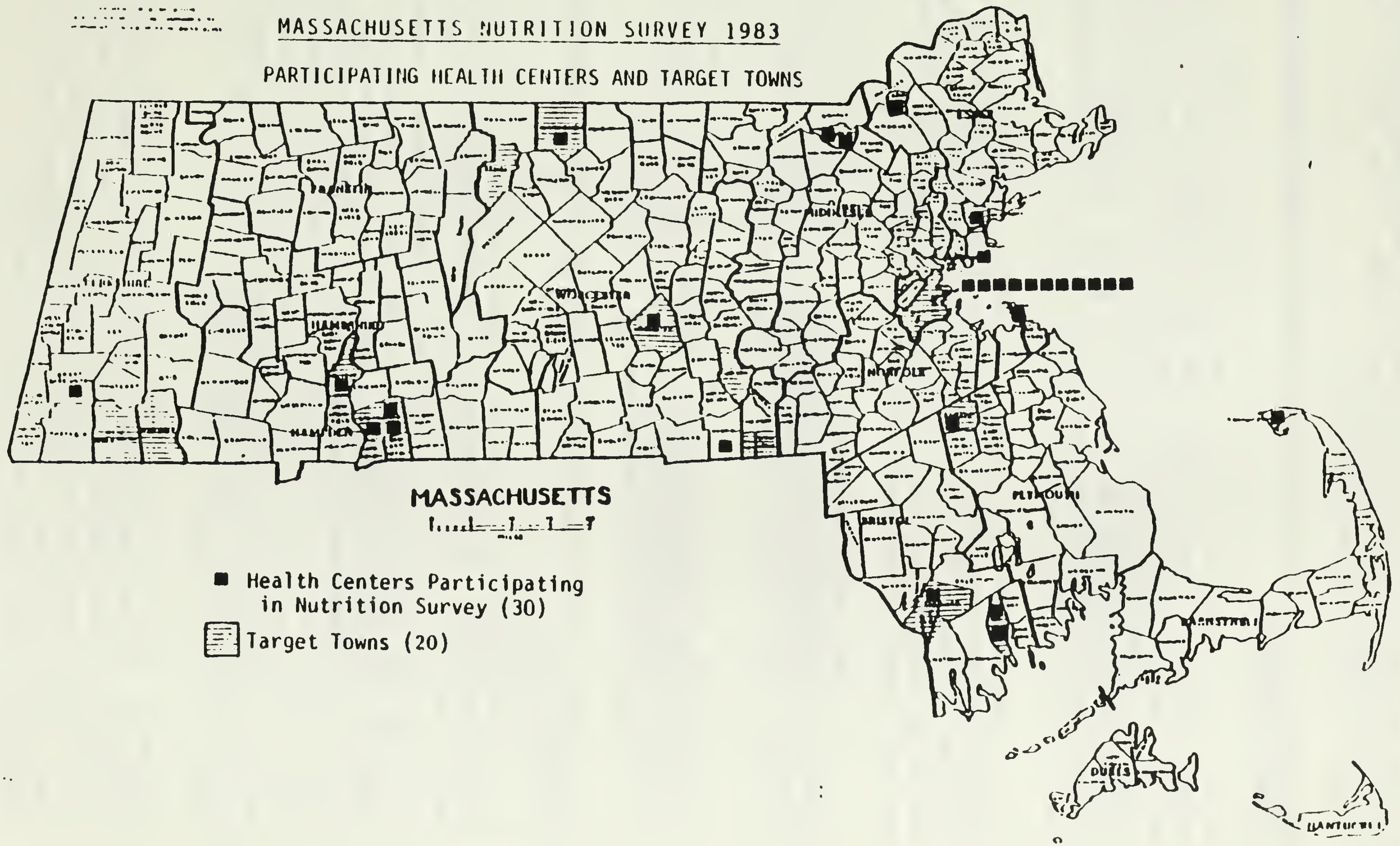
Table 17

PRE-1950 HOUSING UNITS FOR THE 25 MASSACHUSETTS CITIES WITH THE LARGEST CHILD POPULATIONS IN MASSACHUSETTS

(Based on 1980 Census Data)

City	All Pre-1950 Housing Units # Units	% of Housing Units	Number of Pre-1950 Renter Occupied Housing Units
Somerville	26,684	86.2	16,327
Medford	16,508	80.0	6,641
Fall River	28,648	77.4	18,066
Lynn	25,178	77.2	12,124
Cambridge	31,349	75.9	21,621
New Bedford	29,626	75.0	16,935
Fitchburg	11,471	74.8	5,601
Boston	179,267	74.3	112,878
Lawrence	19,278	74.2	11,833
Newton	20,907	71.9	5,897
Worcester	43,609	70.8	22,561
Malden	15,149	70.6	7,390
Lowell	24,411	70.0	12,145
Haverhill	12,807	69.2	5,485
Holyoke	12,361	68.6	7,235
Pittsfield	13,989	68.5	5,885
Quincy	22,960	67.0	8,933
Taunton	10,961	65.5	4,707
Springfield	36,337	61.9	17,228
Waltham	12,054	56.8	6,586
Brockton	18,479	53.3	9,243
Chicopee	10,647	50.5	5,169
Weymouth	9,333	47.0	1,876
Plymouth	4,766	36.2	1,927
Framingham	6,923	28.1	3,268
MASSACHUSETTS	1,211,497	56.6	540,908

Figure 17



MASSACHUSETTS NUTRITION SURVEY 1983

PARTICIPATING HEALTH CENTERS AND TARGET TOWNS

MDPH/DFHS 6/83

The survey methodology was developed by the Division in consultation with a group of nutrition experts and pediatricians, including those whose initial case reports of malnutrition prompted the legislature to provide funds for the survey. The major findings related to nutritional status included:

- Malnutrition is a significant health problem among poor, young children.

  9.8% of the sampled children were stunted, or had height-for-age levels below the 5th percentile of national norms, twice what would be expected. This finding means that an estimated 10,000 to 17,500 poor, young children across the state may be suffering from inadequate food intake over a prolonged period of time, with consequences for learning abilities and health status.

- 3% of the sampled children were wasted, or had weight-for-height levels below the 5th percentile of national norms. While the extent of wasting was less than would be expected, these children will require follow-up and may require medical attention as well.

- 12.2% of the children who had had recent blood tests were anemic. Prolonged iron deficiency may result in learning problems, impairment of body defenses against infectious diseases, and greater risk of lead poisoning.

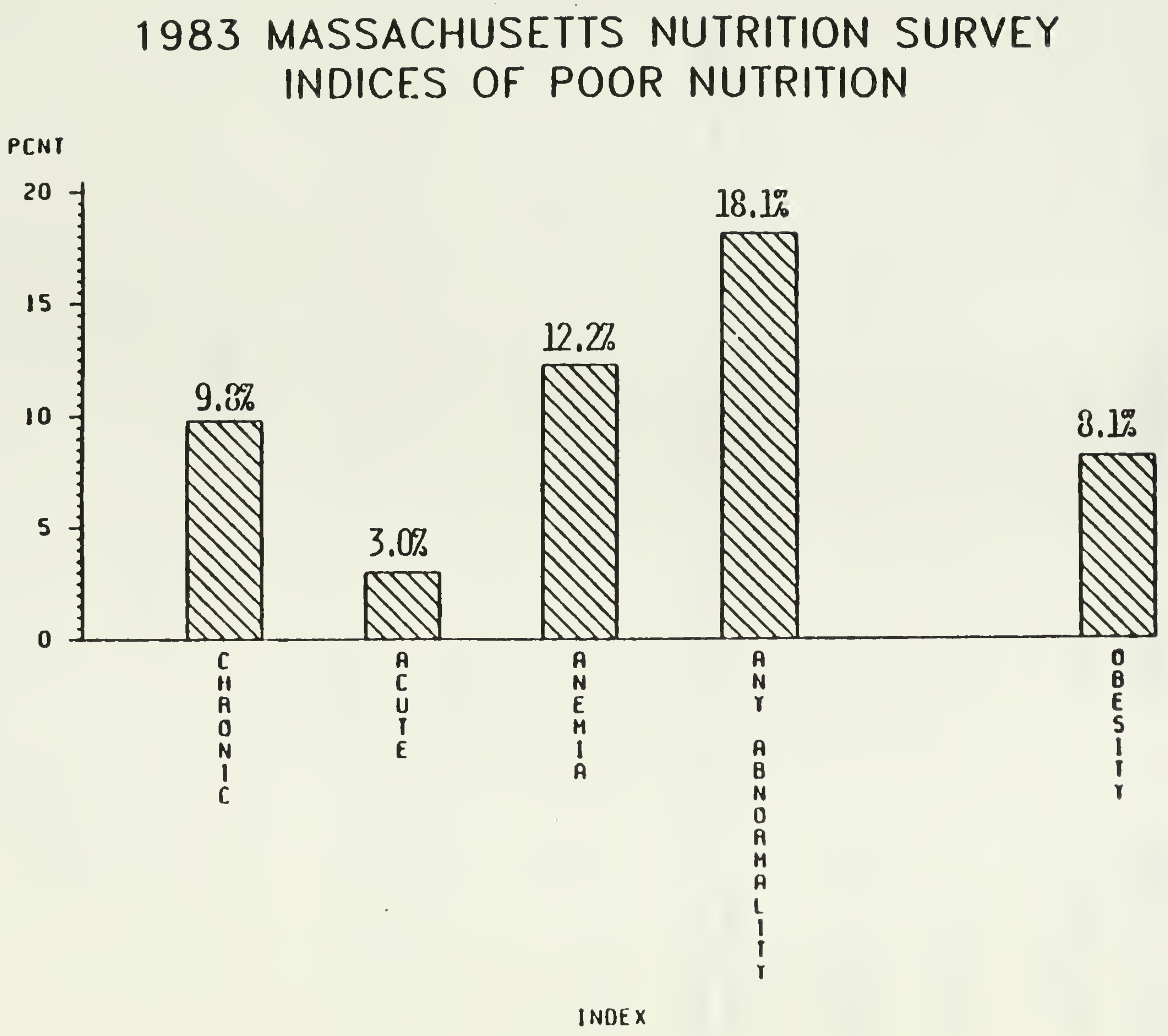
- 18.1% of the children had one or more of the above three indicators of undernutrition. Additionally, 8.1% of the children sampled were obese, a significantly higher percentage than would be expected. (Figure 18.)

- The poorest group of children had the highest levels of stunting.

  Even though the entire survey sample consisted of low income children, differences in the magnitude of stunting were found according to income level. 10.5% of the sampled children whose families lived below the federal poverty line ($8,220 for a family of three) were stunted, more than double the percent for those sampled children whose families' income was somewhere above 200% of the poverty line. This difference existed across all racial/ethnic groups, but was most pronounced for white children. The level of stunting for white children below the poverty line was significantly higher than that for white children in higher income groups. (Table 18.)

  Southeast Asian children appeared to be at particularly high risk for malnutrition. 15.7% of Southeast Asian children in the sample were stunted; 11.8% were wasted. Both these levels were significantly higher than for the other racial groups. Some of these children were recent immigrants, but many were born in the U.S.

Figure 18



1983 MASSACHUSETTS NUTRITION SURVEY
INDICES OF POOR NUTRITION

Table 18

1983 MASSACHUSETTS NUTRITION SURVEY

Percentage Low Height-for-Age by Poverty and Race

POVERTY LEVEL	BLACK	HISPANIC	WHITE	OTHER*	TOTAL
less than 100%	7.0	7.2	16.2	14.6	10.5
100-200%	5.2	5.4	10.3	12.5	8.8
greater than 200%	5.9	-	5.4	-	5.0

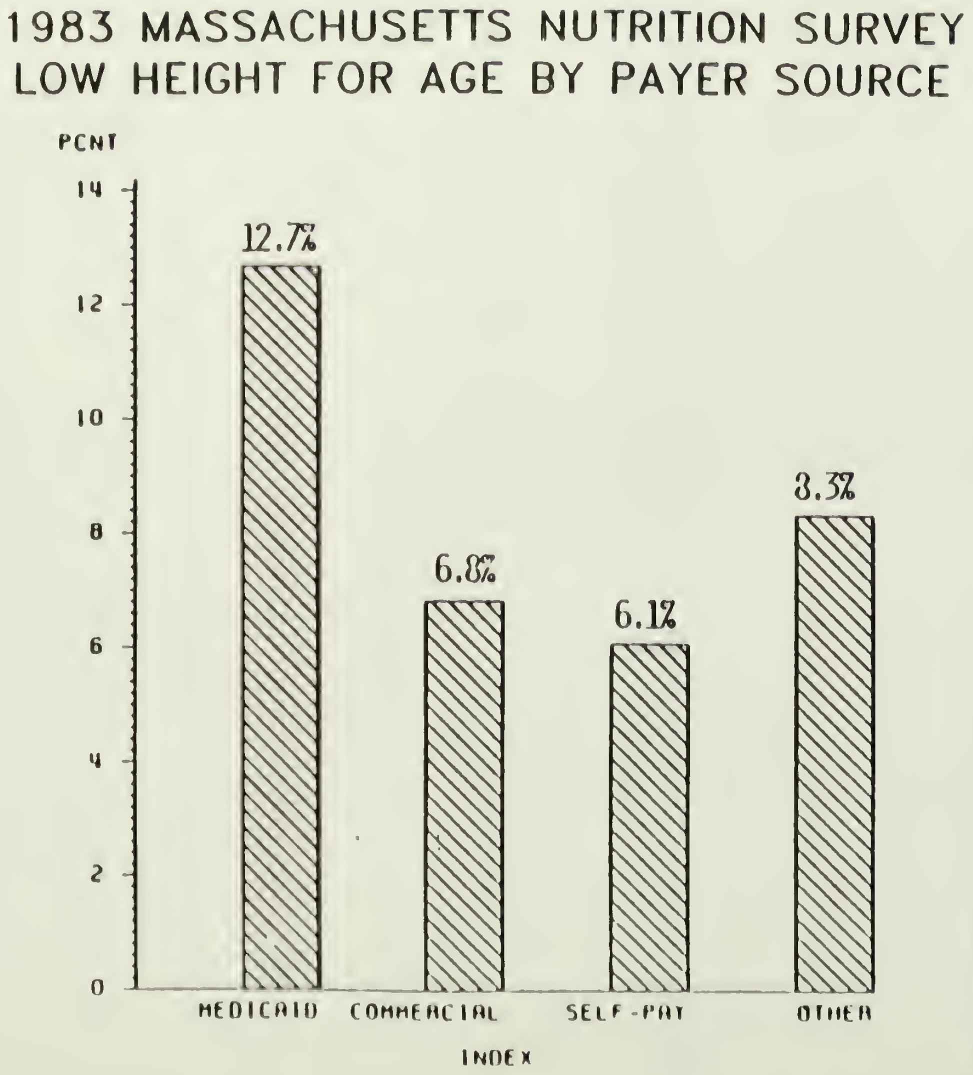
* The Other category is comprised primarily of Asians. It also includes American Indians and people who were reported as Other.

> Those children enrolled in the Medicaid program evidenced a higher level of stunting than the children whose medical care was covered by another source. 12% of the children on Medicaid had this indicator of chronic undernutrition (Figure 19). This finding alerts the state Medicaid program, particularly its Project Good Health component, to pay special attention to the preventive health needs of these children.

Findings of the MNS which related to food and income services are included under the "Service Indicators" section of this report. More recent, refined analyses of MNS data were published in the Massachusetts Journal of Community Health, Fall/Winter 1985-86. (Readers are referred to this publication for further information).

The Division will be designing an ongoing system for nutrition surveillance during FFY 1987.

Figure 19


1983 MASSACHUSETTS NUTRITION SURVEY
LOW HEIGHT FOR AGE BY PAYER SOURCE
PCNT
14
12
10
8
6
4
2
0
12.7%
6.8%
6.1%
8.3%
MEDICAID
COMMERCIAL
SELF-PAY
OTHER
INDEX

C. SERVICE INDICATORS

Prenatal Care

Early, continuous and comprehensive prenatal care is associated with positive birth outcome. To be effective, prenatal care must begin within the first three months of pregnancy (first trimester), assess a woman's risk for delivering prematurely or developing other problems during pregnancy, promote an adequate diet and breastfeeding, reduce or eliminate substance use, assist the woman in assuring adequate income and reducing stress in her environment, and provide family planning services.

In Massachusetts, babies born to women who had no prenatal care have a neonatal mortality rate ten times greater and a low birthweight rate five times greater than for women who receive adequate care (Figure 20).

The birth certificate provides the only statewide information on utilization of prenatal care. An index is derived from the trimester in which prenatal care began and the number of prenatal visits, adjusted for gestational age. While this index does not indicate whether a woman has received the kind and amount of prenatal care she needs, it measures the number of visits she receives against a minimal standard (nine visits over the course of a full-term pregnancy).

After steadily increasing to a high of 82.9% in 1981, the percentage of women receiving adequate prenatal care in Massachusetts began to decline in 1982, with 81.8% receiving adequate prenatal care. This percentage declined to 79.8% in 1983, and slightly further to 79.7 in 1984. (Table 19). The percentage of women receiving inadequate or no prenatal care increased from 2.7% in 1981 to 3.2% in 1983, stabilizing at that same level in 1984.

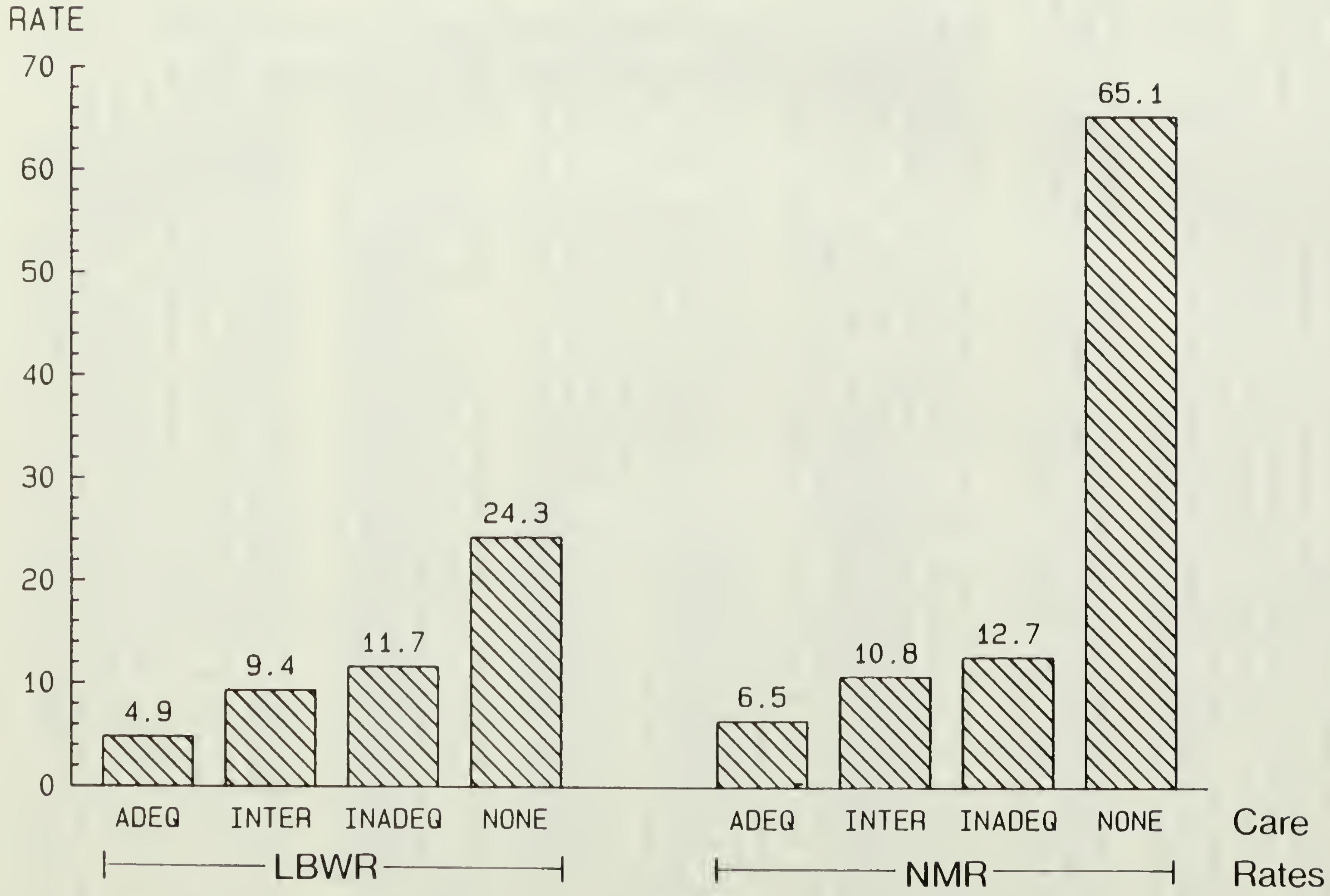
Another measure of the adequacy of prenatal care is the trimester in which prenatal care began. In 1984, of those women with known trimester of registration, 85.6% registered in the first trimester, 12% in the second trimester, 2% in the third, and .4% did not register for prenatal care. The percent registering in the first trimester declined from 88% in 1982 (Table 20).

Registration for prenatal care varies by community (Figure 21, Table 20). Holyoke, Springfield, Fitchburg and New Bedford have a low proportion of births among women who registered early for prenatal care (55.5, 72.0, 75.2, 75.7 respectively). These same areas have a low percentage of women receiving adequate prenatal care (51.4, 68.8, 69.9, 65.2 respectively) compared with the state rate of 79.7. Seventeen of the 25 cities in the state with the largest population of children exceeded the state rate (3.2%) for percentage of women receiving no or inadequate prenatal care.

Figure 20

NEONATAL MORTALITY AND LOW BIRTHWEIGHT RATES BY PRENATAL CARE UTILIZATION

MASSACHUSETTS 1980-1984



DATA SOURCE: DIVISION OF HEALTH STATISTICS AND RESEARCH, DPH

Table 19

PRENATAL CARE UTILIZATION* FOR THE 25 CITIES WITH THE LARGEST CHILD POPULATION IN MASSACHUSETTS, 1984

	PRENATAL CARE		
	Adequate %	Intermediate %	Inadequate or None %
Holyoke	51.4	34.6	14.0
Brockton	63.8	29.4	6.8
New Bedford	65.2	29.9	4.9
Fall River	66.2	31.1	2.7
Lowell	68.6	25.0	6.4
Springfield	68.8	24.2	7.0
Fitchburg	69.9	23.5	6.6
Taunton	70.1	25.2	4.7
Lawrence	70.8	25.2	4.0
Lynn	71.8	23.7	4.5
Chicopee	75.4	20.9	3.7
Plymouth	78.1	18.8	3.1
Boston	78.8	17.3	3.9
Somerville	78.9	17.4	3.7
Pittsfield	79.1	16.1	4.8
Malden	79.2	18.2	2.7
Haverhill	79.3	17.2	3.5
MASSACHUSETTS	79.7	17.1	3.2
Worcester	80.1	17.8	2.1
Cambridge	82.9	13.6	3.5
Medford	83.3	14.1	2.6
Waltham	86.1	11.5	2.4
Quincy	88.5	9.6	1.9
Weymouth	89.4	8.7	1.9
Framingham	91.0	6.8	2.2
Newton	92.3	6.8	0.9

* Defined in terms of trimester of registration and number of prenatal visits, adjusted for length of gestation

Data Source: Division of Health Statistics and Research, Department of Public Health

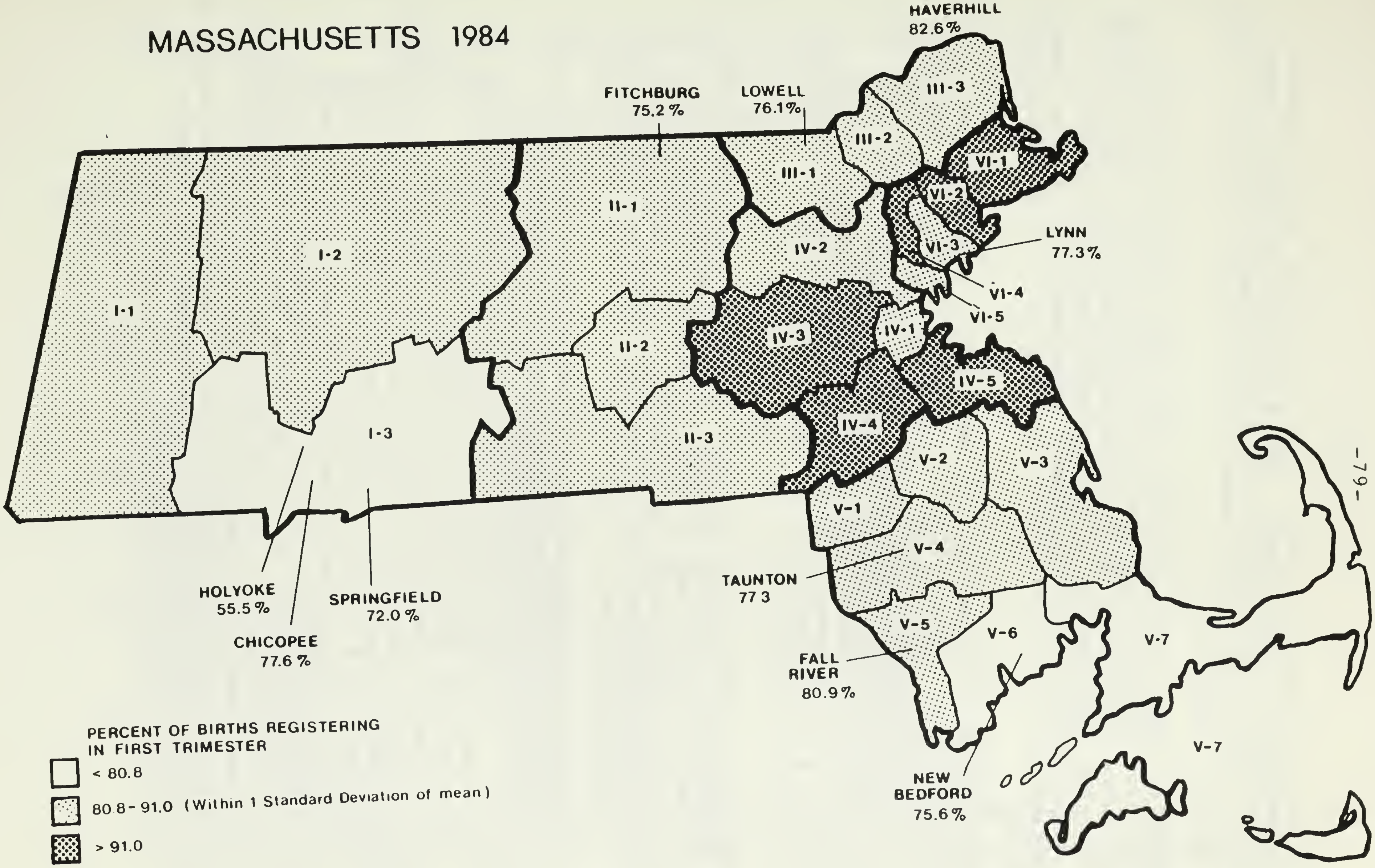
Table 20
Proportion of Births By Trimester of Prenatal Care Registration for the 25 cities with the Largest Child Population in Massachusetts, 1984

	TRIMESTER OF REGISTRATION			
	FIRST	SECOND	THIRD	NONE
Holyoke	55.5	33.0	9.7	1.8
Springfield	72.0	21.8	5.5	0.7
Fitchburg	75.2	19.4	5.1	0.3
New Bedford	75.7	21.1	2.9	0.3
Lowell	76.1	19.6	3.5	0.8
Lynn	77.2	19.4	2.5	0.8
Taunton	77.3	18.9	3.2	0.6
Chicopee	77.6	19.3	3.2	0.0
Brockton	80.0	15.6	4.1	0.3
Fall River	80.9	17.3	1.3	0.5
Lawrence	82.4	15.4	1.2	1.0
Plymouth	82.6	14.8	2.3	0.3
Haverhill	82.6	14.4	2.7	0.3
Boston	83.2	14.0	2.3	0.5
Pittsfield	83.3	13.1	3.5	0.1
Somerville	85.3	12.0	2.1	0.6
MASSACHUSETTS	85.6	12.0	2.0	0.4
Worcester	85.9	12.7	1.1	0.3
Malden	86.4	11.2	1.8	0.6
Cambridge	88.1	9.4	2.1	0.3
Waltham	89.1	9.0	1.6	0.3
Medford	91.2	7.1	1.7	0.0
Quincy	91.4	7.2	1.3	0.1
Weymouth	91.6	6.6	1.5	0.3
Framingham	93.2	5.4	1.1	0.3
Newton	95.7	3.7	0.6	0.0

Data Source: Division of Health Statistics and Research, Department of Public Health

Percent of births with prenatal care in the first trimester by HSA subareas-- AND 10 CITIES WITH LOWEST % EARLY REGISTRANTS

MASSACHUSETTS 1984



Prepared by; Division of Family Health Services, MDPH
Data Source; Division of Health Statistics and Research, MDPH

Pregnant teenagers are less likely to obtain early prenatal care as compared to older women. While 88.0% of births to women over age 19 had prenatal care in the first trimester in 1984, this percentage drops to 65.1% for women age 18-19 and to 53.4% for teens under age 18. (Figure 22)

Minority women are less likely than white women to register early and more likely to register late or not at all. While 87.2% of white women delivering in 1984 had early prenatal care, only 74.7% of black women and 72.7% of Hispanics had early prenatal care. Additionally, 5.7% of Hispanic women and 4.6% of black women had received late or no prenatal care compared to 2% of white women. (Figure 23)

Women of low socioeconomic status may not have the resources to seek prenatal care. Educational attainment is sometimes used as a measure of socioeconomic status. In 1984 only 67.8% of births to women with an education below twelfth grade had early prenatal care, whereas 84.2% of births to women who graduated high school had prenatal care in the first trimester of their pregnancy. More importantly, 6.3% of women with less than twelfth-grade education had no or late care versus 2.3% of women with at least a twelfth grade education. (Figure 24)

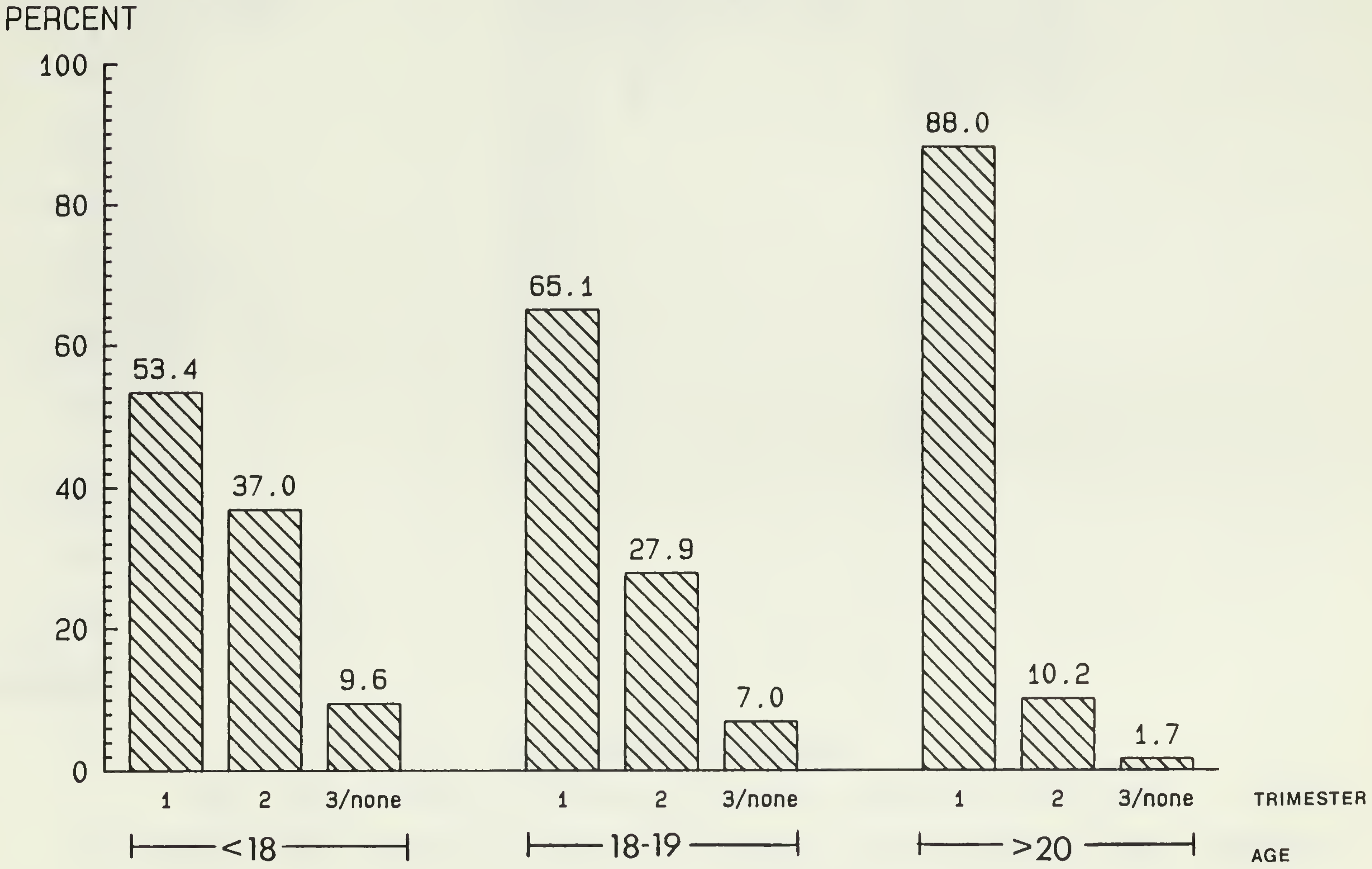
Access to prenatal care is often determined by the availability of the system which provides services. In Massachusetts, 40 Community Health Centers and 32 hospitals offer prenatal care, primarily to low-income women (Figure 25). These resources, 20 of them subsidized by Maternal and Infant Care projects, clearly are not available in all areas of the state.

In addition, obstetricians in private practice serve the majority (estimated at 85%) of pregnant women in the state. Medicaid insures roughly 100,000 women of childbearing age in Massachusetts. In recent years, participation of obstetricians in Medicaid had been declining with less than 50% enrolled in June, 1985. The state has entered into an agreement with the Massachusetts Medical Society to enroll 85% of all physicians, with specific provisions regarding specialists such as obstetricians and particularly underserved areas. Additionally in FY 1986, the Massachusetts Medicaid program increased its "global fee" for prenatal delivery and postpartum care from $508 to $1027, which includes "enhanced" services such as case management and health education. A one-year fund of $750,000 also has been created as an incentive for physicians and nurse-midwives who enroll in Medicaid and utilize the global fee. Medicaid has also responded to obstetricians concerns regarding paperwork, audits and timeliness of payments. It is hoped that all of these measures will improve obstetrician participation in Medicaid.

FIGURE 22

PERCENT OF BIRTHS REGISTERED FOR PRENATAL CARE BY TRIMESTER OF REGISTRATION AND AGE

MASSACHUSETTS 1984

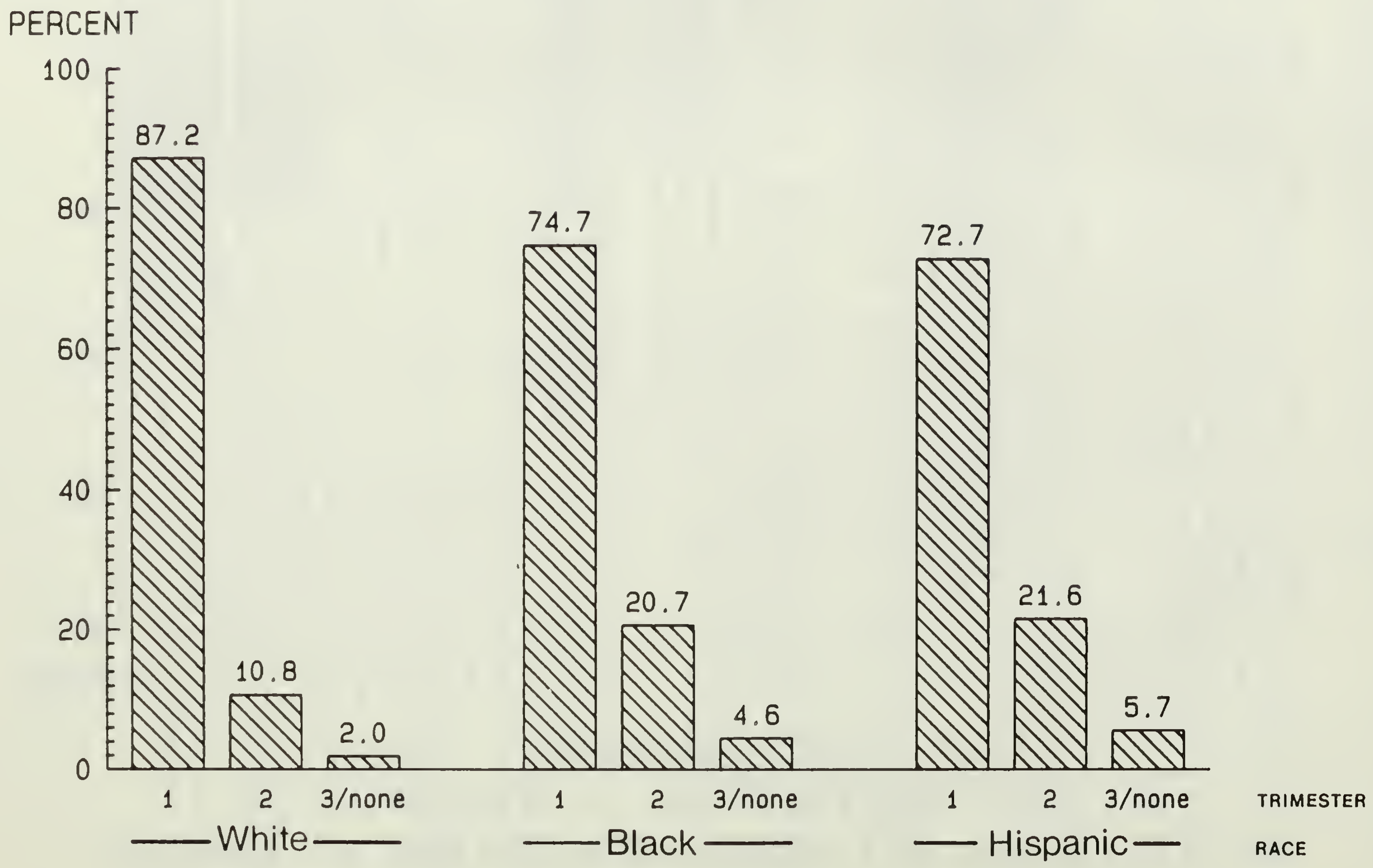


DATA SOURCE: DIVISION OF HEALTH STATISTICS
AND RESEARCH, DPH

Figure 23

PERCENT OF BIRTHS REGISTERED FOR PRENATAL CARE BY RACE AND TRIMESTER OF REGISTRATION

MASSACHUSETTS 1984

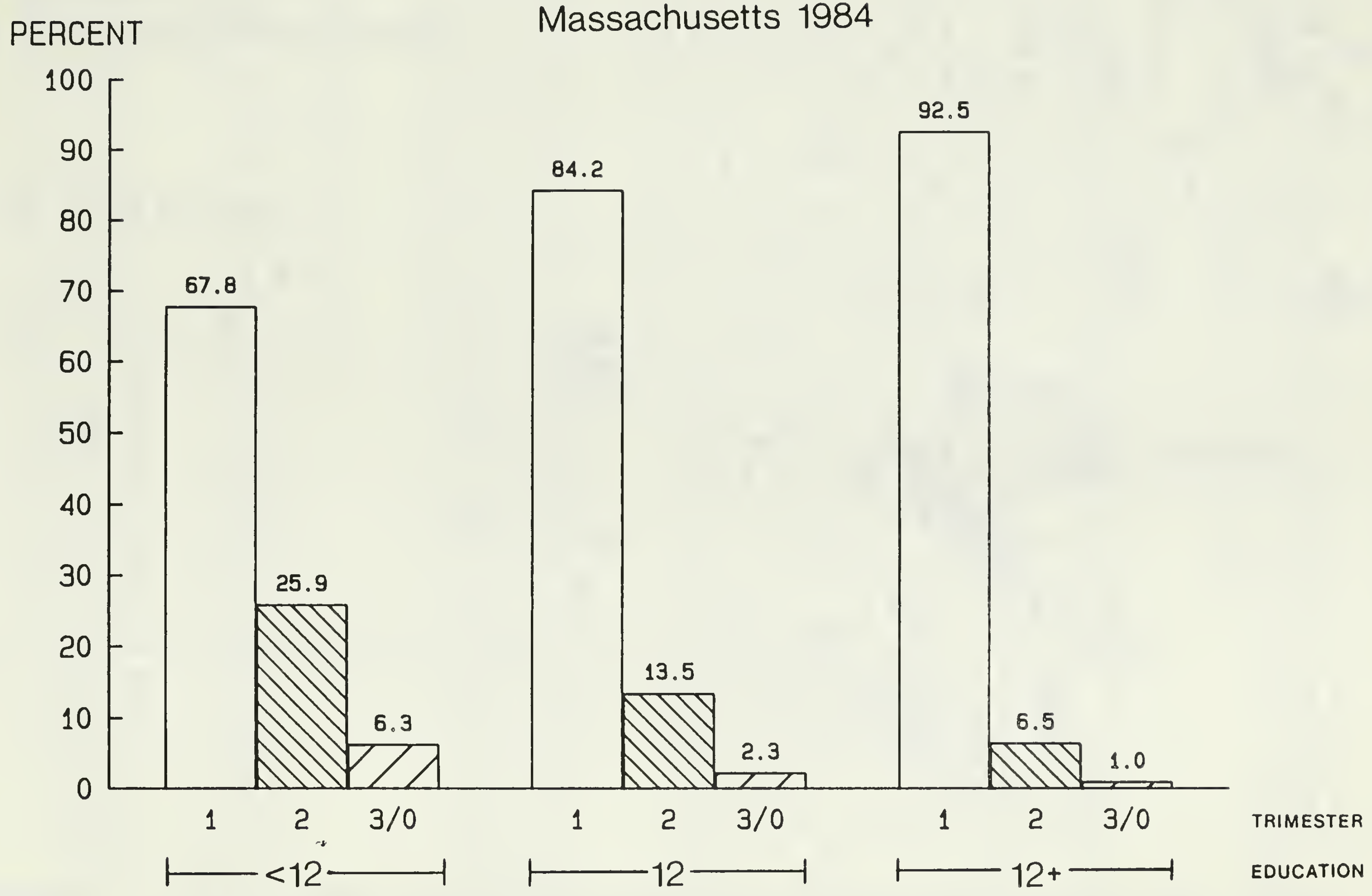


DATA SOURCE: DIVISION OF HEALTH STATISTICS AND
RESEARCH, DPH

Figure 24

PERCENT OF BIRTHS TO WOMEN WHO REGISTERED FOR PRENATAL CARE BY TRIMESTER OF REGISTRATION AND MATERNAL EDUCATION

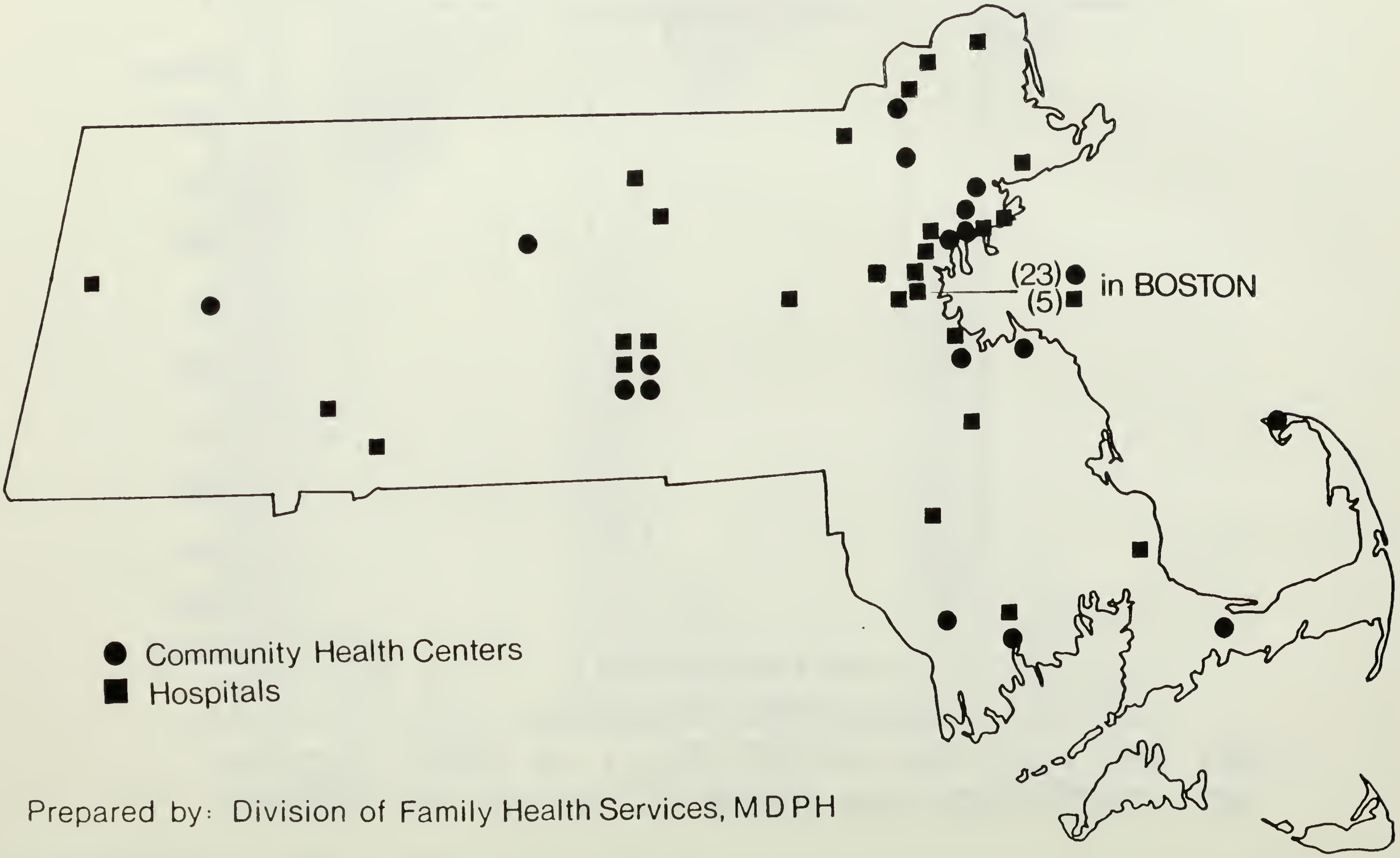
Massachusetts 1984



DATA SOURCE: DIVISION OF HEALTH STATISTICS AND
RESEARCH, DPH

Figure 25

COMMUNITY HEALTH CENTERS AND HOSPITALS OFFERING PRENATAL CARE



Prepared by: Division of Family Health Services, MDPH

In 1986, concerns regarding malpractice rate increases threatened to affect the availabiity of obstetric care for all pregnant women. The Governor has filed legislation to address these concerns, which will be acted on by the Legislature.

Finally, it should be noted that the state has taken some steps to support the role of nurse-midwives. Legislation requiring private third party reimbursement for their services was enacted in 1985, and attention is now being focused on malpractice issues for this important group of maternity care providers.

Pediatric Care

Access to quality comprehensive health care is difficult to measure. However, the presence of pediatricians in a community can be used to roughly assess the availability of child health care.

In 1980, 744 Massachusetts physicians indicated their primary specialty to be pediatrics. The ratio of children under age 14 per pediatrician was 1455:1; for children under age 19 it was 2314:1. Figure 26 shows the relative distribution of children under age 14 per pediatrician by HSA subarea. While child to pediatrician ratios are not an adequate measure of availability of care, as other primary care physicians may also serve children, the higher ratios in the Merrimack Valley (HSA 3) and Southeastern Massachusetts (HSA 5) should be noted. The relatively low ratios in Boston may be deceptive as they mask differences in smaller geographic areas, and because many Boston pediatricians practice in teaching hospitals, often providing specialty care to children from outside the Boston area. Evidence indicates that these pediatricians are accessible to low-income children in Massachusetts.

In 1983, the American Academy of Pediatricians conducted a survey of Medicaid participation in Massachusetts. The physicians surveyed were office-based, non-federal pediatricians, practicing full-time. The percent of pediatricians participating in Medicaid was reported as 95%. High reimbursement rates and prompt payment for pediatricians' services were reported to have contributed to their high level of participation.

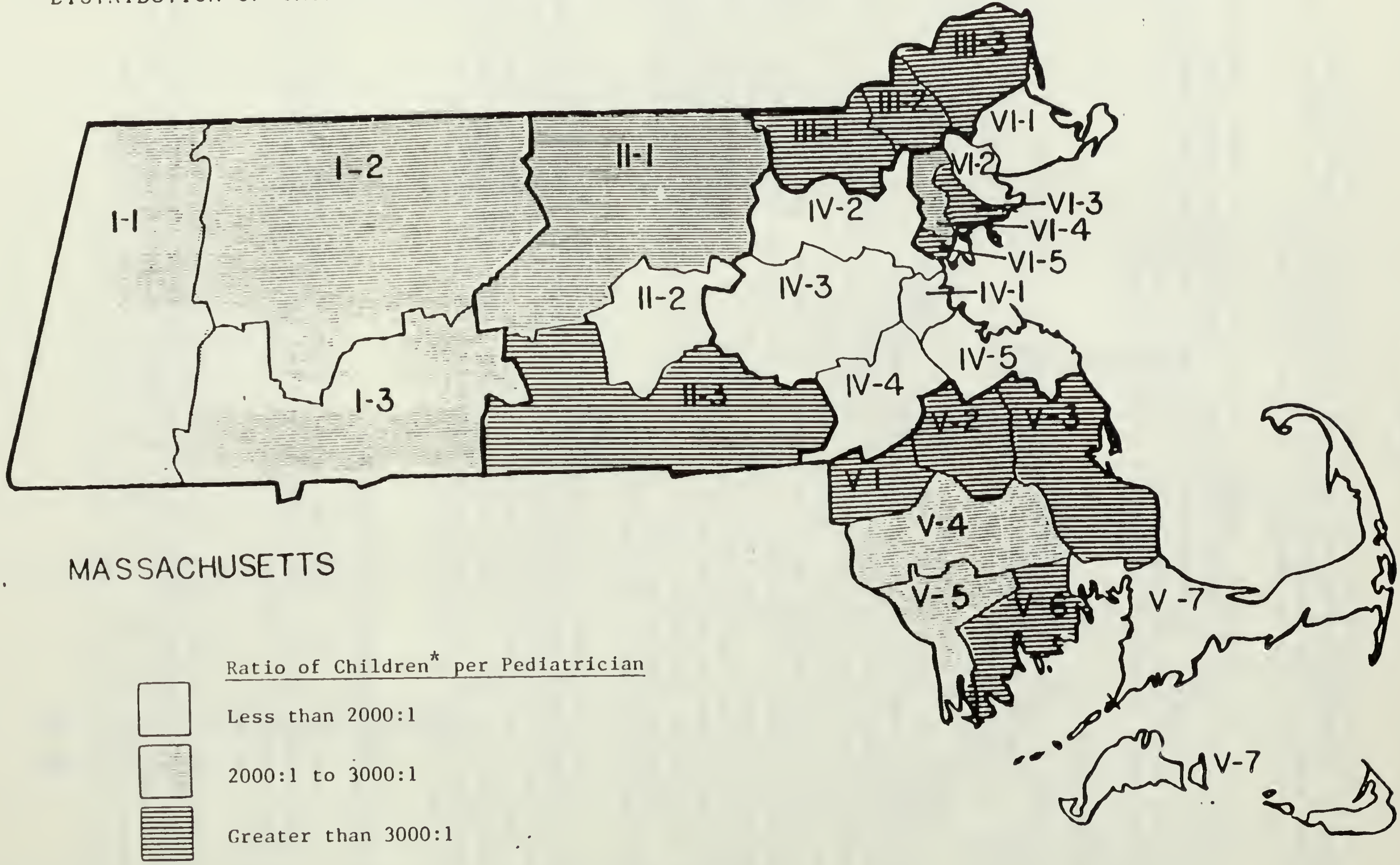
Lead Poisoning Prevention Program

In 1984, 151,954 children were screened for lead poisoning. This represents an 20% increase from last year in the number of children screened. Overall, 1,490 of these children were identified as lead poisoned.

There is a great deal of variability statewide both in the number of children screened and in the number with elevated blood lead levels. Table 21 shows the statewide distribution of children screened by HSA in 1983. In HSA I, 19.1% of all children were screened while 62% of those in HSA IV were tested.

Figure 26

DISTRIBUTION OF CHILD POPULATION* TO PEDIATRICIAN RATIO BY HSA SUBAREA, 1980



*Children Under Age 14

Table 21

MASSACHUSETTS LEAD PAINT POISONING SCREENING ACTIVITY - 1983

	Children Screened				
HSA	Number	Percent Pop. (6 mo.-6 yr)	Percent Positive	Number Positive	Estimated Number*
I	10,100	19.1	2.8	286	715
II	14,516	29.4	2.8	41	103
III	12,837	34.7	4.4	569	1,423
IV	53,119	61.8	0.9	483	1,208
V	23,176	30.7	6.0	140	350
VI	13,190	35.0	1.5	209	523
MASSACHUSETTS	126,938	34.2	1.4	1,728	4,322

* Should the screening penetration rate remain stable at 34.2%, using the new CDC recommended lead level of 25mcg/dl and recommended EP level of 35 mcg/dl, we estimate that caseload will rise 2-3 fold.

Services to Handicapped Children

Handicapped children are found throughout the Commonwealth. In studying the special health care needs of children, Project SERVE estimated that 5% (100,000) of the childhood population (birth to 22) have a chronic illness or disabling condition and require specialized health and related services.

Historically, the SHC Clinic Program has provided services in rural areas, where access to specialized care is more difficult. Children with orthopedic, neurologic, cardiac, oro-facial and developmental diagnoses are served through a statewide network of 54 regional specialty clinics staffed by full-time Services for Handicapped Children professional staff and part-time medical consultants, and situated throughout the state at sites which include public health hospitals, private hospitals and clinics. Children having cystic fibrosis, in-born errors of metabolism and seizure disorders may be treated in 15 approved non-regional settings in the private sector when they meet financial eligibility criteria. The non-regional clinics offer fee-for service payment for specialty care for financially eligible patients.

Table 22 shows the distribution of SHC clinic patients by Department of Public Health Region. There were 4,381 active patients in the clinic system during January 1986. During state FY '85, the program served 5,473 patients.

Table 23 shows the distribution of all active SHC patients by clinic type. Orthopedic problems account for nearly half the total (2,074) active patients. Other common handicapping conditions are cardiac (621), neurological (621), and oro-facial (369) defects. Together these four sets of conditions account for 87% of all active patients.

In November, 1985, Project SERVE, the three-year, federally funded needs assessment of handicapped and chronically ill children in Massachusetts released its report and recommendations. Among its recommendations, Project SERVE suggested that the Division shift its limited resources away from specialty service provision for selected handicaps, and support the delivery of comprehensive clinical services within the private sector. In order for this to occur, however, private sector resources would have to be readily available and sufficiently comprehensive to meet the needs of clinic clients and their families. Therefore, Project SERVE also recommended that clinical care specialists be deployed to the private sector, and that appropriate standards, monitoring and certification procedures be developed.

Severely handicapped children are involved with multiple providers. The Case Management Services Unit provides technical assistance and case management services to aid families in coordinating the educational, social, medical, rehabilitative and developmental services their child receives. Any handicapped child

Table 22

Distribution of Services for Handicapped Children Clinic Patients
By DPH Region

Clinic Region	Jan. 1986 Number of Active Patients	State Fiscal Yr. 1985 Total Number of Active Patients
Western	600	791
Central	932	1,123
Northeast	1,070	1,490
Southeast	1,487	2,008
Boston Office	292	61
Mass. Subtotal	4,381	5,473
Total	4,381*	5,473*

* Does not include Epilepsy Clients

Table 23

Distribution of SHC Patients By Clinic Type
Statewide January 1986 and FY '85

Clinic Type	Jan. 1986	Fiscal Yr. 1985
Orthopedic	2,074	2,520
Cardiac	621	751
Neurology	621	747
Oro-Facial	369	481
Scoliosis	252	396
Cerebral Palsy	85	105
Myelodysplasia	87	92
Developmental	60	74
Inborn Errors	-	-
Genetics	36	35
Plastic	4	6
Pediatric	--	-
Brace	9	7
* Other	163	259
TOTALS	4,381	5,473

* Note This clinic type category includes Chronic, Special Medical Needs and Unknown.

**Note Does not include Epilepsy clients.

up to age 18 is eligible for the service, but the priority is to serve severely handicapped children, including those receiving Supplemental Security Income and those served through other Divisional Services For Handicapped Children Programs. Table 24 illustrates the number of SSI recipients by DPH region, as well as the number of referrals, technical assistance and case-management caseloads for FY'85.

The Early Intervention Program

There are currently 43 Early Intervention (EI) Programs administered by the Division. These programs are intended to identify and assist children who are at established, biological, or environmental risk of developmental disability at as early an age as possible. In 1984, 2,500 children, about 1.2% of all children under age three, were served by these programs. A needs assessment conducted by the Division in the spring of 1984 revealed that 25,417 children, birth to three, are in need of early intervention services. At the end of FFY '85, approximately 13% of the birth to three population and their families in need of early intervention services were served. This represents 1.9% of the total population, birth to three.

Higher proportions of this population are served in western Massachusetts and in some of Boston's suburbs than in the southeastern and northeastern sections of the state. Plans are being implemented to correct inequities across the state as well as to meet more of the potential need for Early Intervention Services across the state.

Services To Improve Nutritional Status

The 1983 Massachusetts Nutrition Survey provided some information on the extent to which low income preschool children were receiving food and income benefits.

Information on family income provided estimates of the percentage of children who might be financially eligible for Aid to Families with Dependent Children (AFDC), Food Stamps and the Women, Infants and Children (WIC) Program. 18% of the sampled children who appeared to be financially eligible for AFDC were not receiving its benefits. 32% of the sampled children who appeared to be financially eligible for Food Stamps were not receiving them. While these percentages are not exact because these programs consider other factors such as assets, living costs and family situation in determining eligibility, they indicate that a substantial number of eligible children are not receiving benefits.

Table 24

CASE MANAGEMENT SERVICES (CMSU)*

Region	FFY '85 SSI Recipients < 18	FFY '85 Referrals To CMSU	FFY '85 Technical Assistance Cases	Active Management Cases in Final Quarter, FFY '85
West	750	91	519	99
Central	693	228	191	174
Northeast	1720	98	108	144
Southeast	1927	330	333	375
Metro Boston	1879	65	144	200
TOTALS	7041**	812	1459***	992

* Cases are generated both through outreach to Supplemental Security Income (SSI) recipients, as well as referrals.

** Includes 72 cases not assigned to a region.

*** Includes 164 Technical Assistance cases handled by the Central Office Training Specialist. In addition, the Training Specialist provided 10 statewide trainings on SSI eligibility, application and appeals process. CMSU Director provided an additional twelve trainings on resource availability and regional offices gave 22 presentations to regional and local agencies.

Unlike AFDC and Food Stamps, WIC is not an entitlement program and does not have sufficient funding to serve all who are eligible. While additional funding in FY 1983 allowed Massachusetts to increase its caseload, at the time of the survey it reached only 19% of financially-eligible children aged one to five statewide. While the survey indicated that the WIC program had a high participation rate (45.8%) among this group of children who use health centers, compared to the statewide participation rate, it also confirmed that the program does not reach all who require it. 15% of the children who were both financially eligible and had documented nutritional deficits were not enrolled in WIC. Statewide, this population is estimated to be about 10,000 children. In FY 1986, WIC was reaching 44% of the total estimated eligible population of women, infants and children statewide.

D. RELATING NEEDS ASSESSMENT TO PROGRAM LOCATION

In maternal and child health programs where funding is limited and spending must be targeted where it will be most effective, assessing the areas of greatest need for each type of service is an important task.

No one factor is a good indicator of need, particularly at the town/city level, where small population and low birth rates may provide rates that are unstable from year to year. On the other hand, aggregating geographic areas can mask smaller areas with significantly high rates. A variety of factors usually need to be examined in doing a needs assessment. The factors and their relative weights should vary depending on the objective of the program for which the needs assessment is being done. For example, an adolescent pregnancy program should put a large emphasis on the number and rate of births to teenage mothers.

Current and Past Efforts

Beginning in 1982, needs assessments have been carried out for several programs in the Division. Most of these programs distribute funds via a review process that linked the results of the statistical needs assessment with proposals submitted on an open, competitive basis. While available funds are insufficient to provide services for all individuals needing them, the introduction of more quantitative and systematic needs assessment methods permitted targeting of resources to areas and populations of greatest need.

Two statistical needs assessment methodologies have been developed. The first one, which utilized principal component analysis, was initially developed in 1982 for the WIC program and then modified slightly for the Primary Pediatric and Prenatal Care Program.

The second statistical needs assessment methodology was developed for the Lead Paint Poisoning Prevention Program. It utilized the findings of the National Health and Nutrition Examination Survey (NHANES) with respect to the prevalence of lead poisoning of children by various socioeconomic factors.

Needs assessments have also been conducted on the need for early intervention services, day care services, high risk infant services, handicapped children services and rape crisis services.

WIC Needs Assessment

The needs assessment methodology for WIC was originally developed in 1982 by a committee of experts including academicians, public-health planners, statisticians, pediatricians, and nutritionists from the community and the Department of Public

Health. This methodology has remained basically the same in the last four years, although the needs assessment is updated periodically utilizing new information. A needs assessment score was developed utilizing both health and poverty data. Selection of data items was based on their degree of correlation with the need for service and uniform availability of the information for all Massachusetts cities and towns. Three health indicators were chosen:

- Neonatal Mortality Rate (5-year rate)
- Low Birth Weight Rate (5-year rate)
- Teenage Birth Rate (5-year rate)
  (i.e. # deliveries to women age 17/1000 births)

These health indicators were converted to a Health Index utilizing a statistical procedure called Principle Component Analysis. Two poverty indicators were chosen:

- Percent of children less than age 5 below poverty (census data)
- Unemployment rate

These were converted into a Poverty Index utilizing Principle Component Analysis. The Health Index and Poverty Index were then combined into a Needs Assessment Score. The Health Index was given greater weight because the health data were more current and provided a better picture of the risk of poor perinatal outcome. These scores were ranked to determine the relative need status of each city and town.

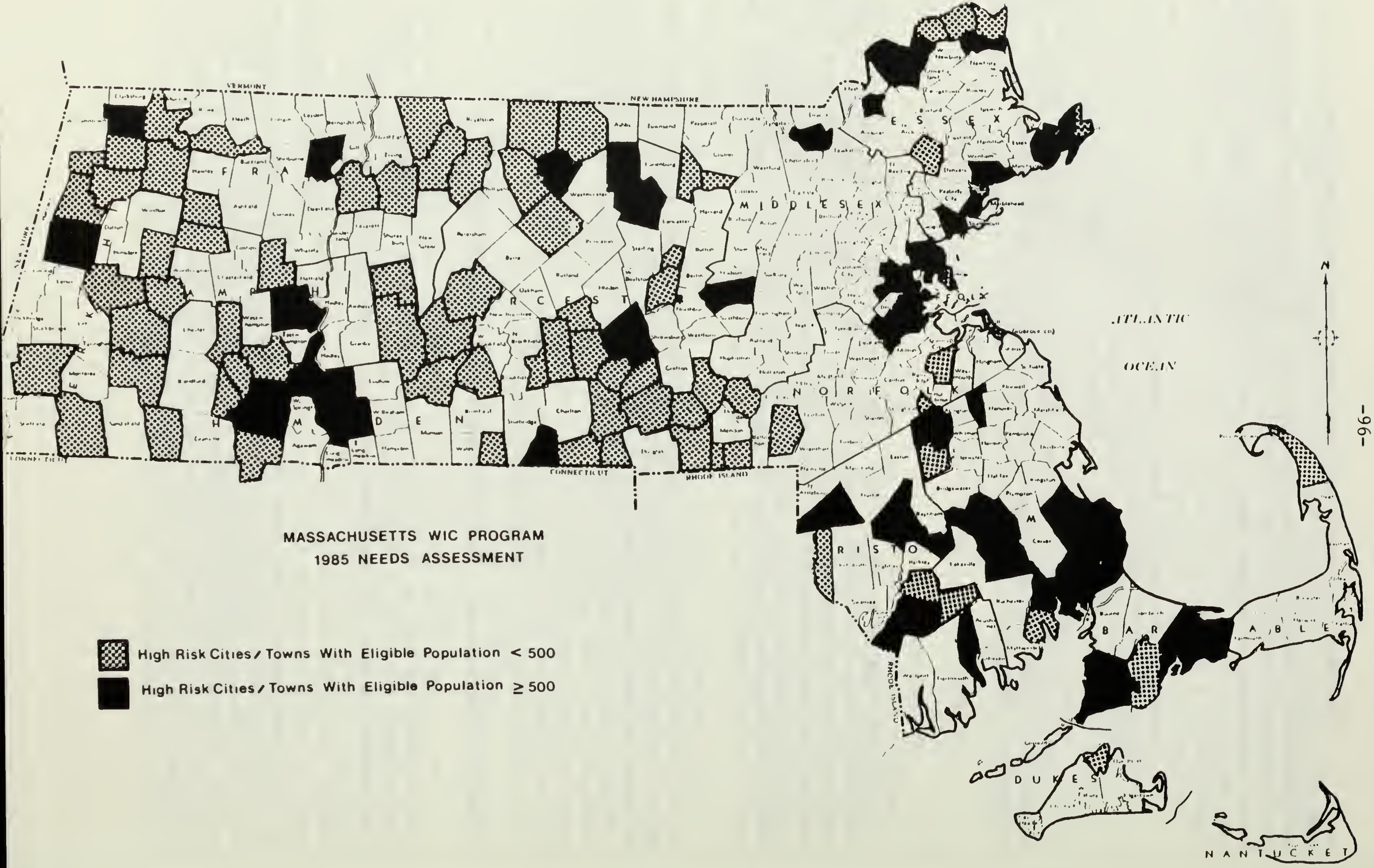
The number of individuals in need of WIC services was then estimated according to the characteristics of the population toward which the services of the program are targeted, specifically: percent of children under age 5, below 200% of poverty level and number of poor pregnancies for each city and town. This formula is the same one used by the USDA. Funds are allocated to geographic areas using a combination of the number of individuals in need of WIC services and the needs assessment score. Figure 27 illustrates the results of the FY 1985 needs assessment.

Primary Pediatric and Prenatal Care Needs Assessment

The Primary Care Program provides services to almost the same type of population as WIC, but in this case the services provided are primary prenatal and pediatric medical care. Because of the similarity of the target population to that of WIC, the Primary Care Program utilized the same needs assessment methodology as WIC, but varied the criteria used to determine the number of individuals in need in order to match their program criteria. Criteria employed were percentage of families under 200% of poverty level; percentage of children under age six; and number of births in 1980 for each city and town. Available funds were then allocated to HSAs in a manner proportionate to the number of individuals in need. Proposals received were evaluated according to the quality of the proposed program and the contractor's ability to serve individuals in areas determined to be at highest need. (Figure 28)

Figure 27

WIC Program - Needs Assessment FY'85



In the spring of 1985, the Division convened a committee of health planners, practitioners and statisticians to perform a current needs assessment for prenatal care services. Cities and towns were grouped into ambulatory care areas and, based on population size, were differentiated as Urban or Non-Urban Areas. The committee developed a needs assessment score based on principal component analysis which provided a relative ranking of need for prenatal services. This score was based on low birthweight, neonatal mortality, insufficient prenatal care and deliveries with Medicaid or no insurance. An indication of magnitude of need was then determined by estimating the number of women who delivered in 1983 who were in households with an income less than 200% of the poverty level (Figure 28).

Childhood Lead Poisoning Prevention Needs Assessment

As mentioned previously, the Lead Paint Poisoning Needs Assessment was based on the NHANES Survey which had been conducted between 1976 and 1980. This survey provides national estimates of elevated blood lead levels among children based on blood samples obtained from a representative sample of the U.S. population. Published information from NHANES provides estimates of the childhood population with elevated (≥30 ug/Pb/dl whole blood) lead levels controlling for factors such as race, family income and urbanization.

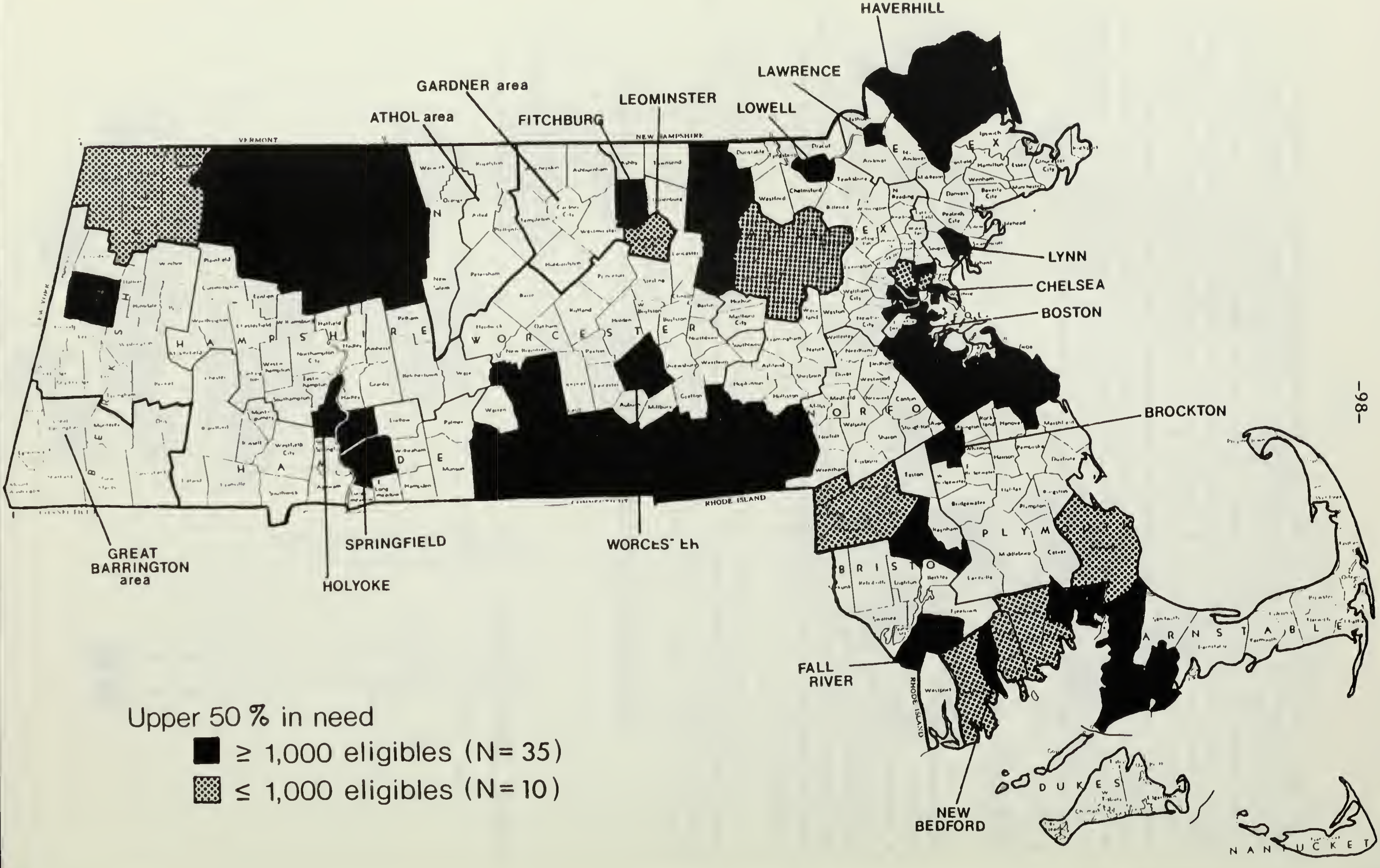
These Income groups were adjusted slightly to reflect the availability of data and a set of rates were added for Hispanics who were believed not to have the same rates as either whites or blacks. The rates utilized were:

Estimated Prevalence of Elevated Blood Lead Levels

	Race		
	White	Black	Hispanic
Family Income (1979)	% of children 6 months - 5 years		
< $7,500	5.9	18.5	13.5
$7,500 - 14,999	2.2	12.1	9.1
≥ $15,000	0.7	2.8	2.1

Figure 28

PRIMARY CARE NEEDS ASSESSMENT - 1985
AND TARGETED HIGH RISK COMMUNITIES



Within each city and town the proportion of white, black and hispanic families falling within the three-family income categories was determined and applied to the childhood population figures previously determined. The estimated prevalence rates shown in the above Table were then applied to the family income and race-specific population data for each city and town to yield estimates of the number and percent of children with elevated blood lead levels. Towns were then ranked within Health Service Area (HSA) by the percent of children less than age five who potentially had a high blood lead level.

The recently lowered guidelines for the threshold level of lead above which there is poisoning from the Centers for Disease Control cited earlier, may result in an estimated threefold increase in those eligible for the lead program. In addition, with improved case management, the lead poisoning program is now better able to determine communities at high risk.

Early Intervention Program Needs Assessment

In the spring of 1984 the Division convened a multi-disciplinary group to complete a Needs Assessment for Early Intervention Services. The needs assessment determined the number of biologically at-risk, environmentally at-risk, and established risk children for each of the 43 service areas. Using prevalence rates and population statistics, this information was analyzed for each service area. The areas were prioritized by determining the proportion of statewide need, and each area was assigned a needs score. The needs assessment determined that 25,417 children, 11.2% of all children from birth to three years of age, were eligible for Early Intervention services. 53% of those children were established risk, 5% were biological risk and 42% were environmentally at risk for developmental delays.

Day Care Needs Assessment

A survey of health practices and training needs in licensed Boston day care centers was conducted by the Division in 1984 to help define its role in preschool health. Results indicated that 40-50% offer screening for vision, hearing, nutrition and dental problems, and 50-80% incorporate one or more health-related curriculum topics. Centers that are larger, have more health consultant hours, or are affiliated with a neighborhood health center, Head Start program or the Department of Social Services tend to offer more health services and request less assistance.

The survey revealed an unexpected degree of interest in providing more services and receiving training. From this needs assessment, it appeared that training in the reduction and prevention of communicable diseases should be integrated into a comprehensive preventive preschool health initiative, with strengthened linkages with existing community resources.

High Risk Infant Follow-Up Needs Assessment

The 1981 needs assessment for determining where services for high-risk newborns should be focused consisted of determining where there were areas with pockets of poor perinatal outcome. Areas that were high in three or more of the following rates were deemed in highest need of follow-up services: Teenage Delivery , Neonatal Mortality, and Low Birth Weight.

Handicapped Children's Clinical Services Program

In conjunction with the Department of Maternal and Child Health and Aging of the Harvard School of Public Health and the Children's Hospital Developmental Evaluation Clinic, the Massachusetts MCH program was awarded a three year federal "SPRANS" (Special Project of Regional and National Significance) grant in FFY 1984 to assess service needs of handicapped and chronically-ill children in the Commonwealth. Known as "Project SERVE", the goals were to document existing services, both public and private, to identify unserved/overserved populations, to determine service gaps, and to provide the Division of Family Health Services with alternative service models as a means of resolving identified problems and improving the overall service delivery system. Data collection, analysis and model-development phases were completed at the end of FFY 1985 and recommendations developed in FFY 1986. The recommendations of this extensive needs assessment will be reviewed and implemented by the Division in FFY 1987.

Women's Health Program

In FFY 1986, the Women's Health Program began a needs assessment of Southeast Asian (Cambodian) refugee women. During FFY 1987, a questionnaire on access issues, health status, cultural attitudes and client's experience of abuse or violence will be distributed to approximately 200 providers and Cambodian refugee women. Following an analysis of this data, the Women's Health unit will develop recommendations for targeting rape crisis services to Southeast Asians.

IV. STATEMENT OF GOALS AND OBJECTIVES

MISSION STATEMENT:

To promote the health of women, children and families by assuring access to quality health care for high risk and special need groups, and by developing and implementing strategies to prevent death, disease and disability.

Goal I.

To reduce the Neonatal Mortality Rate to 5.5 and the Infant Mortality Rate to 7.8 by the end of 1987 primarily through further efforts to reduce low birthweight births, and to target high-risk women including the poor, minorities and adolescents.

Objective I.1: To ensure early and continous access to high quality comprehensive maternity care to all pregnant women with incomes below 185% of the federal poverty line.

Strategies to be Employed:

a. Continue to assure access to care for uninsured, Medicaid ineligible pregnant women through the state funded Healthy Start program. The program will be fully implemented in FFY '87, with case management and support services available.
b. Support community coalitions in high-risk communities to assess maternal and infant health needs and problems and to plan and implement community based solutions. Communities to be assisted include: Holyoke, Brockton, Fall River, New Bedford, Lowell, Springfield, Boston, Worcester, Haverhill, Lawrence, Leominster/Fitchburg, North Adams/Berkshires, and Athol/Orange areas.
c. Maintain support for current comprehensive Maternal and Infant Care (MIC) programs through FFY 1987. Evaluate current MIC model in light of recent changes in the perinatal health care system, and develop goals and content for a statewide competitive Request for Proposals (RFP).
d. Analyze results of survey of 3,000 postpartum women, to determine barriers to receiving adequate care.
e. Conduct survey of prenatal care providers to determine services currently available and perception of needs of high risk women.
f. Evaluate survey results, determine implications for programs and begin implementation of strategies developed in four target communities.
g. Collaborate with the state Medicaid agency to ensure maximum utilization of Medicaid for pregnant women.
h. Review, evaluate and revise as needed existing standards for maternity and infant care, including prenatal care, hospital obstetrical care, neonatal care, and community MCH nursing. An advisory committee will be established to work in conjunction with staff to complete this task. Review and initiate revision, as appropriate, of relevant licensure regulations and audit standards.

i. Maintain statewide media and outreach campaign designed to inform women about factors related to healthy birth outcomes, particularly the importance of receiving early and continuous comprehensive prenatal care. Strategies and messages will be targeted to high-risk women. Begin determining means to maintain education and outreach efforts in future years.
j. Continuously monitor and evaluate client and program data to determine efficacy in achieving objectives particularly in reaching high-risk women, including minorities and adolescents.

Objective I.2. To increase knowledge among providers, women of childbearing age, and the general public about factors which contribute to prevention of infant mortality and morbidity, and to improve primary prevention strategies.

Strategies to be Employed:

a. Incorporate messages regarding nutrition, substance use and other factors affecting birth outcomes in the Healthy Start media and education campaign.
b. Continue to support the Environmental Hotline, providing information on the effect of hazardous substances on the health of pregnant women and their unborn children.
c. Provide genetic education and information to the general public and targeted providers throughout the Commonwealth.
d. Collaborate with the Department of Education to develop comprehensive school health curricula and model health education projects which integrate information about genetics and other factors influencing birth outcomes and the maintenance of infant health.
e. Organize a system for the collection of epidemiological data in order to monitor the prevalance of genetic diseases and congenital anomalies identified by the High Risk Infant Identification System.

Objective I.3. To identify and ensure appropriate follow-up services to 10,000 at-risk infants and their families throughout the state.

Strategies to be Employed:

a. Maintain and improve the existing High-Risk Infant Identification (HRII) system. Develop and implement a quality assurance plan. Develop and provide reports to hospitals on high risk infants and perinatal transfers. Revise training package for hospitals.
b. Maintain funding supports to Massachusetts Neonatal Intensive Care Units (NICU's), and further their role in working with community hospitals and agencies.

c. Strengthen DPH coordination of perinatal care at the regional level by designating perinatal care coordinators at the 4 regional offices and by adding a Boston office.
d. Research and develop a plan to improve reimbursement for high risk infant care, including back transfer of infants from NICU's to community hospitals.
e. Implement newly revised state law for last resort payment of hospital expenses for premature and other high-risk infants, including establishment of eligibility guidelines.
f. Develop standards for community-based MCH nursing via protocol development and certification, training, in-service education and technical assistance. By the end of FFY 1987 all interested agencies will have had the opportunity to participate in the certification process.
g. Develop, maintain and refine linkages between HRII perinatal health programs, early intervention programs, and other Division programs, as appropriate.
h. Continued support for the statewide Sudden Infant Death Syndrome program in providing autopsies, professional education and public awareness activities, referral and follow-up services for families, and coordination with the state medical examiner's office.

Goal II.

To improve the nutritional status of the Commonwealth's residents, with particular focus on high-risk pregnant women, infants and young children.

Objective II.1. To implement an ongoing statewide nutrition surveillance system, with the pediatric component in place by the end of FFY 1987.

Strategies to be Employed:

a. Analyze the results of the pilot pediatric nutrition surveillance project in the Worcester area to develop and implement plans for a statewide system.
b. Implement and evaluate a statewide data system on emergency food programs.
c. Implement and analyze data from revised forms for WIC, Healthy Start and Maternal and Infant Care (MIC) projects to monitor nutritional status during pregnancy.
d. Collaborate with the Department of Elder Affairs to systematize and computerize data collected from elderly food programs, and to include data on the elderly as part of ongoing nutrition surveillance.
e. Provide data from the surveillance systems to the federal Centers for Disease Control (CDC).
f. Develop plan for utilization, analysis and reporting of data from surveillance systems for the purpose of policy development and program utilization.

Objective II.2. To promote improved coordination and development of nutrition related services, standards and policies statewide through the Office of Nutrition.

Strategies to be Employed:

a. Provide staff support to the Massachusetts Nutrition Board in developing policy recommendations and interagency strategies to improve the nutritional status of high-risk groups. Primary emphasis in FFY '87 will be on assessing existing state administered programs, with particular attention to their relationship with federal programs and their targeting and outreach strategies.
b. To collaborate with other state agencies to improve nutrition standards and services offered to their client populations, including the Departments of Correction, Youth Services, Mental Health and Elderly Affairs.
c. To analyze, report and make recommendations based on data from the nutrition surveillance system and nutrition programs.

Objective II.3.: To increase the proportion of low income and minority women who breastfeed their babies.

Strategies to be Employed:

a. Analyze data from the revised birth certificate, hospital reports and from WIC, MIC and Healthy Start programs to establish baseline rates for breastfeeding, and to better identify target groups and areas for breastfeeding promotion.
b. Continue participation on the Statewide Task Force to Promote Breastfeeding.
c. Distribute poster to increase awareness concerning the benefits of breastfeeding.
d. Produce and distribute newsletter on breastfeeding promotion statewide to health professionals and providers.
e. Incorporate measures to promote breastfeeding in Departmental efforts to develop comprehensive standards of maternity and neonatal care and to revise licensure regulations accordingly.
f. Implement the statewide WIC breastfeeding promotion plan, and assess and adapt components of the plan for implementation by other maternal and child health programs.
g. Develop and implement education and training materials and modules on breastfeeding promotion.

Objective II.4 To provide health and nutrition services to pregnant and postpartum women, infants and children at risk for or suffering from malnutrition.

Strategies to be Employed:

a. With state expansion money, increase WIC caseload to 68,000 participants during FFY '87, expanding in particularly underserved areas.
b. To advocate for additional WIC funding to reach a larger percentage of the eligible population in need of services.
c. Ensure referral to WIC of children screened for lead paint poisoning who evidence high EP levels, an indicator of anemia.
d. Target WIC services to high-risk groups, including Southeast Asians, in conjunction with MCH programs.
e. To maintain and strengthen Failure To Thrive (FTT) programs in the major teaching hospitals across the state to serve all malnourished children suffering from this condition.
f. To continue to collect and analyze data on children suffering from FTT in order to contribute to understanding of this condition and to plan appropriate services.
g. To support comprehensive primary care service models which include nutrition education and counseling, including MIC, C & Y and Adolescent Health and Pregnancy Programs.
h. To implement mechanisms to provide nutrition services to women enrolled in Healthy Start who receive care from providers not able to offer this service.
i. To develop plans for incorporating nutrition services in Services for Handicapped Children Programs.

Goal III.

To reduce the incidence of preventable diseases and handicapping conditions among young children.

Objective III.1: To provide access to comprehensive high quality pediatric primary care service to 45% of the estimated 100,000 young children living in the high need areas served by Children and Youth (C&Y) Projects.

Strategies to be Employed:

a. Continue to support C & Y projects targeted to low-income, high-risk populations, with distribution of any additional funds to high need areas.
b. Assure access to C & Y care for uninsured children through availability of sliding fee scales and maximization of third party reimbursements to projects.
c. Improve standards and contents of care by including periodicity schedules for well child care, dental care and injury prevention.
d. Require C & Y projects to follow Project Good Health (EPSDT) protocols and periodicity schedules and where administratively feasible, encourage enrollment as a Project Good Health Provider.
e. Assess the special needs of minority population groups, including Southeast Asian refugees, and ensure that contracted programs adequately address these needs.

Objective III.2.: To prevent and provide appropriate care and follow-up for childhood lead poisoning by screening 40% of all children between the ages of 6 months and 5 years, providing case management follow-up for all moderate, high and urgent risk classified children, using the new Centers for Disease Control guidelines, inspecting 1500 dwellings, and deleading 1200 residences annually, in conjunction with the Department's Childhood Lead Poisoning Prevention Program (CLPPP).

Strategies to be Employed:

a. Support the statewide Childhood Lead Poisoning Prevention Program (CLPPP) in developing standards, providing technical assistance and training; screening, managing and following up children; evaluating blood samples; inspecting and deleading homes; and otherwise enforcing Massachusetts lead poisoning statutes.
b. Fund community-based lead paint poisoning projects serving high need areas of the state and give particular support to creative collaborative approaches for lead poisoning prevention such as a loan subsidy program, supported by private lending institutions, which is designed to reduce interest rates on home improvement loans for deleading.
c. Include screening for lead paint poisoning and follow-up services for children under treatment in the standards of appropriate MCH funded programs.

Objective III.3: To reduce the incidence of serious burns, poisonings and motor vehicle related (occupant, pedestrian, bicycle) injuries by 10% from the current level of 210 per 10,000 children by the end of FFY '87.

Strategies to be Employed:

a. Integrate successful approaches and techniques of Statewide Childhood Injury Prevention Program (SCIPP) and Massachusetts Passenger Safety Program (MPSP) within all relevant MCH program areas. By the end of FFY '87 age-specific program guidelines and protocols for injury prevention will be developed for appropriate MCH activities.
b. Maintain adequate support for the Massachusetts Poison Control System, and develop a public education program.
c. Disseminate and field-test training modules for preschool providers, primary care providers, elementary schools and agencies conducting home visits.
d. Evaluate and monitor locally-funded childhood injury prevention demonstration projects.
e. Develop public education and promotional strategies for state residents and decision makers based on SCIPP research.
f. Sponsor an injury prevention conference in each public health region in FFY '87.
g. Obtain the Uniform Hospital Discharge Data Set for FY 1984. Report on the over 100,000 cases of injuries to Massachusetts residents from FY 1983 data set.

h. Increase the awareness among hospital and health professionals on the need for documentation and coding of cause of injury in hospital records.
i. Sponsor an annual statewide passenger safety conference.
j. Design and implement an educational program on the safe and appropriate transportation of handicapped children.
k. Provide technical assistance to local safety belt key resource communities and Department of Transportation funded mini-grant programs.
l. Develop separate objectives and workplans for reducing pedestrian bicycle and motorcycle injuries.
m. Solicit funding to develop and implement prevention strategies relating to pedestrian and bicycle fatalities and non-fatal injuries.

Objective III.4: To promote the incorporation of preventive health services and education into day care and preschool programs statewide.

Strategies to be Employed:

a. Interagency planning to develop priorities for training with Department of Social Services and other state agencies.
b. Collaborate on educational, technical assistance, and service coordination efforts in selected locations among the Division, day care programs, health care providers, and other state or local agencies.
c. Continue to fund one or more preschool health projects to serve day care providers in high need areas.
d. Disseminate A Guide for Day Care Providers in Massachusetts and provide other appropriate educational and training materials on preventive child health issues to day care providers statewide.
e. Implement a health promotion and risk reduction (MCHIP) project for preschool children in family day care homes in one of seven day care licensing regions of the state.
f. Develop a state funding proposal for a comprehensive statewide preschool health initiative.

Objective III.5: To promote improved school health services in all of the Commonwealth's public schools.

Strategies to be Employed:

a. Monitor all school health systems for compliance with state regulations.
b. Analyze benefits and costs of selected school health services and propose any needed changes in statutes or regulations.
c. Provide regular in-service education programs on a regional basis to school nurses.
d. Provide assistance in school health program planning and technical assistance materials to school systems.
e. Work cooperatively with the Division of Communicable and Venereal Diseases to ensure immunization of all children attending preschool programs and all school-age children.

f. Work cooperatively with Services for Handicapped Children staff and the Department of Education and others to improve knowledge, skills, and level of services available in public schools to children with special medical needs.
g. Work cooperatively with the Department of Education to implement an initiative to promote comprehensive health education throughout all grade levels in schools if pending state legislation or funding is approved.

Objective III.6: To identify strategies to further prevent childhood mortality.

Strategies to be Employed:

a. Complete collection and analysis of data on child deaths in 1985.
b. Work collaboratively with other state agencies, experts and advisory groups to present findings and develop recommendations no later than July, 1987.

Goal IV:

To comprehensively address the special health needs of adolescents.

Objective IV.1: To provide comprehensive medical and support services to one third of the estimated 7500 pregnant adolescents under age 20 during FFY '87 and limited education and support to an additional 1500 pregnant teens and 1400 male partners.

Strategies to be Employed:

a. Continue to fund comprehensive adolescent pregnancy programs.
b. Emphasize outreach and services for adolescents in Maternal and Infant Care Projects and the Healthy Start program.

Objective IV.2.: To provide comprehensive medical and preventive counseling services to 17,000 at-risk adolescents and education services to 17,000 teens, parents and professionals during FFY '87.

Strategies to be Employed:

a. Continue to fund comprehensive adolescent health programs throughout the state.
b. Provide educational presentations for health care providers on adolescent health issues.
c. Work with the Governor's Office, Executive Office of Human Services and other state agencies to improve the coordination of services and develop new and expanded service models, with particular attention to exploration of school-based model programs.

Objective IV. 3.: To develop strategies to reduce violence-related morbidity and mortality among adolescents.

Strategies to be Employed:

a. Complete the state-funded study of 1985 child deaths, and use findings to identify strategies to prevent deaths to adolescents due to suicides, homicides and accidents.
b. Seek advice from the Family Health Services Advisory Council, providers of family health services, experts and advocates on strategies to reduce violence among adolescents.
c. Utilize findings from SCIPP research on injury incidence among adolescents to evaluate service needs for this population.

Goal V.

To decrease the incidence of morbidity and mortality related to selected health issues affecting Massachusetts women.

Objective V.1.: To increase the systematic collection and reporting on Massachusetts specific data regarding selected women's health issues, to provide information essential for planning.

Strategies to be Employed:

a. Utilizing available data, assess women's needs for gynecological and reproductive health services, including family planning needs. Identify major problems, gaps in services and data, priorities for services and special needs of minority women.
b. Collect and analyze data on rape victims in the Commonwealth.
c. Maintain an evaluation tool for assessment of services being provided to women in prison.
d. Distribute a questionnaire to collect data on the health problems of Cambodian refugee women living in Massachusetts, and based on an analysis of this data develop recommendations for services.
e. Prepare a report on a pilot project assessing results of comprehensive health education for girls in Department of Youth Services facilities.
f. Prepare a preliminary report on the health status of homeless women currently using shelters in Massachusetts.

Objective V.2: To promote prevention of sexual abuse and domestic violence through education, information, and a network of victim services.

Strategies to be Employed:

a. Maintain and improve rape crisis services throughout Massachusetts.

b. Design and distribute standard training information for providers of services for victims of incest, rape and sexual assault.
c. Provide technical assistance to community-based programs to improve their ability to establish, manage and enhance services for victims of sexual abuse and domestic violence.
d. Provide workshops and seminars, materials and public education campaigns to increase public awareness of issues of sexual abuse and domestic violence.

Objective V.3: To increase public knowledge on issues affecting the health and well being of women in the Commonwealth.

Strategies to be Employed:

a. Provide education to individuals and community groups on gynecological and reproductive health concerns, including diethystilbestrol (DES) and family planning.
b. Plan, coordinate and implement programs based on the "Women in the Workplace," conference.
c. Provide workshops on comprehensive women's health issues to providers to increase their knowledge.

Objective V.4: To provide services for selected groups of underserved women.

Strategies to be Employed:

a. Focus on assessing the needs of the following special populations in FFY 1987: girls involved in the delinquent youth system; Cambodian refugee women; homeless women in shelters and minority women on issues of breast and cervical cancer.
b. Provide workshops and educational materials on office worker health protection to selected target groups.
c. Provide a health program for women in prison that includes attention to reproductive, nutrition, SIDS, stress, substance abuse, parenting and other relevant health issues.
d. Provide diagnostic evaluations through approved centers for daughters and sons of women exposed prenatally to diethylstilbestrol (DES).

Goal VI:

To provide a comprehensive range of preventive, therapeutic, supportive and specialized medical and rehabilitative services for children who are disabled or at risk for disability, and their families, in order to support optimal development and prevent institutionalization.

Objective VI.1: To develop and begin implementation of an action plan to improve and strengthen the Division of Family Health Services role in serving children with special health care needs.

Strategies to be Employed:

a. Complete review and assessment of the findings and recommendations of Project SERVE with prioritization and modification of recommendations which are accepted by the Division.
b. Based on the review and assessment, develop short and long term goals, objectives and workplans for implementation of the recommendations.
c. Continue to disseminate the Project SERVE report and seek broad input on plans to implement its recommendations.

Objective VI.2: To provide technical assistance and/or case management services to handicapped and chronically ill children with priority to SSI recipients and children served through other SHC/MCH programs.

Strategies to be Employed:

a. Through regionally based case management services units, provide appropriate levels of service (technical assistance, case management, advocacy, outreach) to identified handicapped and chronically ill children.
b. Continue to identify and outreach to clients newly enrolled in the SSI program and provide training on SSI and Medicaid eligibility, application and appeal processes.
c. Identify SHC clients in need of case management services and assess level of service required. Provide technical assistance and develop individual service plans as well as case coordination services.
d. Promote intra-agency collaboration with other Division programs and where appropriate provide technical assistance and/or case management services to clients served in those programs.
e. Provide technical assistance, information and training to other Divison programs on resources for handicapped children.
f. Provide technical assistance, consultation and training to other public/private agencies and parents/guardians on federal/state entitlements and services available for handicapped children and their families.

Objective VI.3: To provide uniform, high quality early childhood developmental services to 15% of the 25, 417 birth to 3 population and their families who are in need of these services.

a. Complete the integration of the client-specific data system with a financial management system.
b. Increase linkages with other MCH programs, particularly the High Risk Infant Identification (HRII) system.
c. Expand developmental day care services to Western Massachusetts.
d. Implement a class unit rate purchase of service system for integrated preschool services.

e. Continue to work with the legislature and advocacy groups for passage of private third-party insurance coverage for Early Intervention services.
f. In collaboration with the Massachusetts Department of Education, develop and pilot joint policies and procedures for the transition of children at age three from early childhood developmental services to local education services.
g. Develop and issue a request for proposal to design a permanent early intervention staff training institute.

Objective VI.4: To promote and support a continuum of care for multiply-handicapped children and their families to enable the children to be cared for in the most appropriate and least restrictive environment commensurate with their needs and abilities.

Strategies to be Employed:

a. Continue to provide training, respite, home health care, camperships and adaptive housing services to multiply handicapped children living at home.
b. Pending development of a Medicaid plan amendment, determine eligibility for and arrange provision of the services for chronically ill and severely multiply-handicapped children covered under this amendment for home care and ancillary services.
c. Continue to broaden the base of care providers by providing training of specialized foster care providers and home health aides, and utilize innovative techniques to attract foster and adoptive families and home health care/respite workers for this training through the federally-funded Recruitment Plus Project.
d. Continue to develop media materials for public information/education on the home care/respite needs of multiply handicapped children.
e. Work with other state human service agencies to develop a continuum of needed services for multiply-handicapped individuals and address the issues of eligibility criteria, spectrum of services and funding.
f. Implement the newly revised regulations for Pediatric Nursing Homes to improve the programs and insure the appropriate placement of individuals in these facilities.
g. In conjunction with the Executive Office of Human Services and other state agencies, study the needs of two particularly underserved populations - disabled individuals over 22, including pediatric nursing home residents; and head injured children and adults. Contribute to development of services to address their needs.
h. Expand upon the successful adaptive housing program for eligible families around the state.
i. With state funding for FY '87, plan, develop and implement new models of residential care for severely multiply-handicapped children.

Objective VI.5: To provide, or to ensure provision of, clinical services to handicapped children who lack access to those services.

Strategies to be Employed:

a. To continue to provide SHC clinic services to approximately 5,500 children under the current service model.
b. By the middle of FFY '87, implement a comprehensive, regionalized quality assurance program for the SHC clinic system.
c. Continue to provide limited financial assistance to families of chronically ill children who are not categorically eligible for other SHC clinic services.

Goal VII:

To provide leadership in developing policies, services and standards in the private and public health care system that contribute to a comprehensive approach to the health needs of mothers and children.

Objective VII.1: To provide policy makers and program administrators with a sound data base for planning for maternal and child health services and assessing health status.

Strategies to be Employed:

a. Continue to build computerized coordinated data systems containing information on health status indicators, eligible and at risk populations, service utilization information, etc.
b. Expand and refine systematic epidemiological methodologies for assessing need.
c. Carry out studies of diseases and conditions affecting the health of mothers and children.
d. Publish and disseminate a report on 1985 child deaths which identifies strategies to prevent future deaths among children.
e. Implement a statewide nutrition surveillance system.
f. Develop and begin implementation of a plan to improve the WIC Management Information System.
g. Develop a data system for Children and Youth (C & Y) pediatric programs.
h. Analyze vital statistics and program data to evaluate new perinatal initiatives.

Objective VII.2.: To identify gaps in the health care system, including both service and financial assistance gaps, and to propose and advocate for appropriate solutions.

Strategies to be Employed:

a. Monitor the impact of changes in policies, statutes and regulations affecting maternal and child health.
b. Work collaboratively with advisory groups including the Family Health Services Advisory Council, Early Intervention Advisory Committee, WIC Advisory Committee, Genetics Advisory Committee, and Task Force on Prevention of Low Birthweight and Infant Mortality, and the Massachusetts Nutrition Board, to identify, develop and advocate for strategies to address needs and problems.
c. Participate in interagency work groups and task forces to address the needs of women, children and families in the Commonwealth.
d. To provide leadership in promoting strategies for population groups and services for which the Division has special expertise including services for chronically ill and handicapped children, nutrition services, reproductive and maternity health care, and preventive and primary health care for children.

V. DISTRIBUTION OF SERVICES: INFORMATION ON TYPES OF SERVICES PROVIDED, NUMBER AND CHARACTERISTICS OF INDIVIDUALS SERVED, AND PROGRAM DATA COLLECTED

The extensive table which appears on the following pages provides an overview of the services to be provided by the Maternal and Child Health Services program to achieve the goals and objectives stated in section IV. above. Information is presented in tabular form regarding:

- program name;
- categories and characteristics of individuals to be served;
- numbers to be served in FFY'87;
- types of services provided;
- data currently collected; and
- goals/objectives to which program is addressed.

TABLE 25
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
WIC	68,000 low-income pregnant, breast feeding and postpartum women, infants, and children up to the age of five who are determined to be at nutritional risk.	Individualized nutritional care which includes a food package, nutritional education, and health care referrals.	WIC has a computerized information system which is used for voucher production and collection of programmatic data.	II.4
Maternal and Infant Care Programs	5,000 high-risk, low income mothers and children in high need areas.	Prenatal and postpartum diagnostic and preventive ambulatory health care services; coordination with hospital care and delivery services; social service follow-up; dental care; nutrition and mental-health counseling; and translation services.	Biannual MCH Statistical summary, and perinatal registrant log.	I.1
Children and Youth Programs	45,000 preschool and school-age children up to 21 in low-income, high need areas.	Ambulatory health care including medical examinations and follow-up social services; dental care; nutrition and mental health counseling; and translation services. Coordination with hospital inpatient services.	Biannual MCH statistical summary.	III.1
Failure To Thrive Programs	450 children with FTT syndrome and their families.	Diagnosis and treatment of families with children who are severely underweight and who may have FTT syndrome. Case management, follow-up and coordination of services. Consultation and education to community-based pediatric health-care providers.	Monthly reports on utilization and health outcomes.	II.4

TABLE 25
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Comprehensive Adolescent Health Services	17,000 high-risk adolescents in catchment areas of contracted programs.	Primary-care services for males and females; medical referrals; individual and group counseling and educational services focusing on nutrition, contraception, sexuality, adolescent pregnancy, and prevention of substance abuse; educational materials, and workshops for parents; outreach, informational, and referral networks.	Quarterly statistical reports, annual narrative reports, site visit – quality assurance reports.	IV.2
Pregnant and Parenting Adolescent Programs	2,500 pregnant or parenting teenagers in catchment areas of contracted programs receive comprehensive services; an additional 1500 pregnant teens and 1400 male partners receive some education and support.	Prenatal, postpartum and infant care, and referral and coordination with other service providers; services to partners; medical, nutritional and child-care education; support groups; family planning and education/job counseling.	Quarterly statistical reports, annual narrative report. Additional data from "Mass. Adolescent Pregnancy and Parenting Study" (MAPPS).	IV.1
DES (diethyl-stilbestrol) Program	100 daughters or sons of women given DES during pregnancy.	Specialized diagnostic evaluations at approved medical centers across the state. Toll-free information number available.	Statistical reports.	V.3
High-Risk Infant Identification System	High-risk infants. (Approximately 10,000 per year), including: 1. Premature Infants 2. Infants admitted to Neonatal Intensive Care Units for more than 24 hours. 3. Infants with Congenital Anomalies 4. Infants at Hearing Risk 5. Infants with certain other medical or neurologic risk factors.	Identification of high-risk infants at time of birth with referral to public and private primary care and specialty services, and community-based services, Technical assistance and education to hospitals and community-based providers. Ongoing evaluation of system. Standard setting.	Data on infants requiring intensive care and on specified perinatal morbidity and mortality. Data on infants potentially at risk. Linkage of birth certificate data with data from this system.	I.3

TABLE 25
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Healthy Start	4800 uninsured Medicaid ineligible women with incomes below 185% of the federal poverty level.	Comprehensive prenatal care; hospital delivery and newborn costs; lab and and pharmacy; one postpartum visit; case management.	Data on client demographics, service utilization, and program costs.	I.1
Neonatal Intensive Care Regional Development	All infants admitted to NICU's; community hospitals transferring mothers or infants to NICU's.	Support for improved discharge planning and linkage with community hospitals for Neonatal Intensive Care Unit infants via contracts with all Level III nurseries in state.	Quarterly statistical and narrative reports.	I.3
Premature Infants; Infants at Risk for Hearing Loss	Premature infants and infants meeting hearing risk criteria (approximately 4,500 per year).	Payment of last resort of hospital bills for premature infants whose families are financially eligible. Coordination of services and administration of hearing screening programs.	Data from High Risk Infant Identification system on incidence. Program data on utilization and costs.	I.3
High-Risk Infant Follow-Up (Home-Based Programs)	1,200-1,500 infants and families at-risk due to perinatal morbidity or social-economic-psychological factors in program catchment areas.	Provides community-based support, education, consultation, and referral services to infants and families primarily through home-visiting. Provides linkage between NICU and community services and providers for a selected population.	Semi-annual statistical and narrative reports.	I.3

TABLE 25
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Preschool Health Services	All children in preschool and daycare programs in catchment area of state contracted program; family day care providers in Region II (Worcester County); group day care staff statewide.	Service program: preventive health services, individual assessments, inservice education and consultation with program staff, parent education. Daycare staff and programs: Training materials, including comprehensive manual, Health in Day Care: A Guide for Day Care Providers in Massachusetts. Workshops, conferences, and courses. MCHIP program: Needs assessment, training, technical assistance, materials development, on site program assessments; selected screening activities; telephone consultation.	Semi-annual statistical and narrative reports for contracted services; Statewide needs assessment. Data from MCHIP program.	III.4
School Health Services	All school-age children in the Commonwealth; school health services staff.	Standard setting; enforcement of regulations for school health services; in-service education, technical assistance and consultation for school health professionals; regulation of administration of psychotropic drugs to school-age children; liaison with school health-related programs in other state agencies.	Data collected on vision, hearing, and postural screening activities, and administration of psychotropic drugs in schools throughout the Commonwealth. More extensive program screening and follow-up data collected on over 90 school systems with state approval.	III.5
Hearing Aid Program	Children up to the age of 21 who are determined to need a hearing aid and who meet financial eligibility criteria. Hearing aid repair services are provided for all aids purchased. (Approximately 400 aids purchased yearly and 1000 repaired.)	Purchase of hearing aids; payment for hearing aid repairs.	Demographic, financial, and diagnostic data on children receiving hearing aids under this program.	I.3

TABLE 25

TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Sudden Infant Death Syndrome	Approximately 110 families each year who lose an infant to Sudden Infant Death Syndrome.	Postmortem examinations, home visits and family counseling, referrals to appropriate agencies, community education.	Data collected and reported on demographics, parental reaction to problem; clinical data on the nature of S.I.D.S. also analyzed.	I.3
Statewide Childhood Injury Prevention Program	All children and youth 0-19 years of age in Massachusetts.	Provision of epidemiological data on injuries. Systematic training and technical assistance to providers of children's health services, schools, hospitals, researchers, and other state health departments. Injury Prevention Resource Center, which provides a comprehensive resource for health professionals, schools, business and industries, and others interested in injury control. Development of materials for use by health professionals.	Massachusetts Vital Statistics data on injury-related mortality (1969 - 1984). Mass. Hospital Discharges for injuries (1982, 1983). Population-based injury surveillance system data (ER and and admissions, 1979 - 1982). Survey of Medical Record Professionals (1985). Elementary School Needs Assessment (1985). Key Informant Survey (1985). Household Telephone Survey of preventive behaviors related to injuries (1980 & 1982). Injury Case-Control Study (1982). Camp Injury Data (1984). Poison Control System data (annually). Housing Inspection Surveys (1981 - 1982). Medical Records Dept. Survey of Cause of Injury Coding Practices (1985). Quarterly statistical and narrative reports from funded community projects.	III.3

TABLE 25
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Mass. Passenger Safety Program	All residents of Massachusetts.	Statewide coordination of public and private agencies involved in promoting passenger safety; clearinghouse for occupant restraint information and related materials; implement public information campaigns and training programs/conferences; pursue appropriate legislation, regulatory and enforcement initiatives; conduct observational surveys of occupant seatbelt usage or other program evaluation as appropriate; promote occupant safety as part of comprehensive health education curricula in schools; promote and coordinate car seat loaner programs; promote and support key local safety belt resource communities and NHTSA mini grant programs.	Survey of child restraint and seatbelt usage, 1986; Registry of Motor Vehicles death and injury data. Reports from child car seat loaner programs.	III.3
Environmental Hot Line	3,000 pregnant women, spouses and health-care professionals - estimated utilizers. Open to all state residents.	Information on the effects of hazardous substances on the health of pregnant women and their unborn children through a toll-free number.	Quarterly statistical and narrative reports.	I.2
Poison Prevention	All residents of Commonwealth; approximately 100,000 calls annually (75,000 persons).	Toll-free 24-hour telephone hotline for parents and health professionals on poisonous substances and treatment methods, including medical management of attempted suicides.	Semi-annual statistical and narrative reports.	III.3

TABLE 25

TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Statewide Childhood Lead Poisoning Prevention Program	Statewide 170,000 children under 6 years of age will be tested for lead poisoning; approximately 5,000 will receive case management follow-up due to elevated test results. Efforts will be targeted to children at highest risk. Programs funded through Block Grant cover six catchment areas: Boston, Worcester, Greater Lawrence, Greater Lynn, Springfield, and high-risk urban areas in Southeastern Massachusetts.	Door-to-door and/or on-site screening, laboratory testing of blood samples, medical management and follow-up of lead-poisoned children, environmental hazards investigation, and enforcement of statutes to delead housing built before 1950. Coordination with other state program areas (day care, child health programs, WIC, etc.).	Data for each child screened includes demographics, lead and/or E.P. level, and screening source. Quarterly statistical and narrative monitoring reports from contracted programs. Statewide Case Management data on Class II, III, and IV children, using new CDC definitions of elevated lead levels.	III.2
Specialty Clinics for Handicapped Children	5,500 children with designated handicapping conditions,* and a limited number with chronic diseases.	Diagnostic and treatment services based on an interdisciplinary approach, including input from the following disciplines: medicine, physical therapy, occupational therapy, social service, public health nursing, and others as appropriate.	Computerized client information system with demographics, diagnosis and referral source, monthly clinic attendance report. Annual report generated describing client population and services provided.	VI.4
Genetics Program	1,500 newborns in Massachusetts with a genetic condition and their families, targeted providers, and the public.	Information and referral, education, surveillance, technical assistance, and collaboration with Health Care Quality around laboratory genetic tests.	Clinic service statistics, data on adverse reproductive outcomes.	I.2

* Conditions covered include orthopedic, cerebral palsy, neurologic, seizures, myelodysplasia, cystic fibrosis, oro-facial, plastic, cardiac, hemophilia, PKU, inborn errors of metabolism, and developmental delays.

TABLE 25
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Developmental Day Programs	24 severely multiply-handicapped children ages 6 months to 7 years.	Comprehensive services in which physical, occupational, speech therapy and skilled nursing care are provided in combination with an educational program of developmental stimulation and training in self-help skills for severely multiply-handicapped children. In addition, a parent education program offering training in child care and management techniques, guidance and counseling.	Data on individuals requesting services, semi-annual report on utilization and staffing.	VI.2
Adaptive Housing Modifications	30-50 handicapped children up to age 18.	Housing modifications to enable children to become more independent in the home.	Data on individuals receiving service.	VI.4
Special Medical Need Program	25 chronically-ill children up to age 18.	Payment for a range of necessary medical and rehabilitative services for children ineligible for other SHC clinic programs.	Data on individuals receiving service.	VI.4
Early Intervention Services	5,000 children ages birth to three years who are at established, biological, and environmental risk for developmental delay.	A planned program of developmental stimulation which promotes maximum physical, social, emotional and cognitive development. Nurses, social workers, child development specialists, occupational, physical and speech therapists work as a team with individual families on home visits and with small groups of parents and/or children. The focus is to support parents in the care and management of their child at home.	Annual narrative on overall program operation, utilization and staffing. Data system to record client'sspecific demographic, diagnostic and service data. Semi-annual reports will be generated.	VI.3

TABLE 25
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Integrated Preschools	65 children ages 3 to 6 years with physical handicaps.	A developmental program in which occupational, physical and speech therapy are integrated in an early childhood curriculum to promote physical, social, emotional, and cognitive development. The school integrates handicapped students with able-bodied students. Parents participate in their child's program and in parent groups. A social worker is available to coordinate services needed by the child and his family.	Data on individuals requesting services, semi-annual report on utilization and staffing.	VI.3
Respite Services/ Training	540 children enrolled in handicapped children's clinics, their families and other multiply-handicapped children and their families.	Provision of in-home therapeutic services including nursing, physical therapy and home health aides. Camperships and short-term pediatric nursing home stays. Training program for parents to provide specialized home care.	Data on individuals requesting services, semi-annual report on utilization and staffing for contracted programs, reports from social workers for home care programs.	VI.4
Residential Services	Multiply disabled children through age 22	Community-based residential services which address the developmental, behavioral, social, medical, nutritional, habilitative, vocational and personal care needs of each of the residents.	Periodic progress reports on individuals receiving care in the program.	VI.4
Pediatric Nursing Homes	260 multiply-handicapped children through age 22 requiring nursing and medical care and determined eligible by the state Medical Review Team. Under new regulations, services extended beyond age 22 until more appropriate services have been developed.	Skilled nursing care and intensive therapeutic care in a Level II Medicaid certified facility.	Data on individuals receiving or requesting nursing home care. This data includes medical history, social history, and core evaluations. Reports on admissions to and discharges from residential care to pediatric nursing facilities and nursing home census for each nursing home.	VI.4

TABLE 25
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Epilepsy Drug	170 low-income individuals for whom seizure control drugs have been prescribed.	Purchase of seizure control drugs.	Data includes demographics, financial eligibility, and drugs prescribed.	VI.5
Rheumatic Fever	437 low-income individuals with diagnosis of rheumatic fever for whom prophylactic penicillin has been prescribed.	Purchase of penicillin.	Demographic data.	VI.5
Case Management Services (Supplemental Security Income-Disabled Children's Program)	Handicapped children under 18 are the target population, with priority to SSI recipients and children served through other SHC and MCH programs. Estimated 2,200 children and families will receive some level of service through the case management gradient system.	Outreach, advocacy, training and case management for provision of coordinated and comprehensive services (medical, educational, social, developmental, and rehabilitative) through case coordination, technical assistance, the development and monitoring of individual service planning and limited last-dollar funding for interim services until barriers are resolved.	Computerized data system which includes demographics, identification of child's disabilities, service needs, and patterns of service delivery with identified barriers. Annual report generated.	VI.2
Rape Prevention and Victim Services	Approximately 3,000 victims of rape/sexual abuse statewide and their significant others.	Crisis counseling, advocacy through medical, law enforcment and legal systems, and follow-up counseling for victims and significant others. Preventive education programs to professional and community groups.	Statistical profile of type of assault, place of assault, victim and assailant. Documentation of services provided.	V.2

TABLE 25
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Family Violence and Sexual Abuse Programs -- Resource Center	Approximately 300 low-income and women of color throughout the state.	Educational workshops on prevention of violence and sharing of resources.	Evaluation of consumer satisfaction, increased awareness of resources.	V.2
	Approximately 100 service providers in rape crisis centers/ battered women's shelters throughout Massachusetts.	Leadership training workshops; newsletter; multimedia campaign on violence against women.	Client profile and satisfaction.	
	Approximately 30 multicultural providers given leadership training.			
	All shelters, rape crisis centers, DA offices, DSS offices, as well as general public.			
DES/Public Information and Education	150,000-300,000 mothers, daughters and sons that may have been exposed to Diethylstilbestrol (DES).	Cancer Information Service provides mechanism for dissemination of DES exposure information as it relates to cancer and physiological changes. Educational workshops on DES/ reproductive health issues for schools, community groups and worksites.	Demographic profile of caller. Also numbers of callers by date.	V.3
Reproductive/ Gynecological Health Education	College students and surrounding community women 18 years and older with an emphasis on low-income and minority women.	Reproductive and fertility problems; professional education via workshops, grand rounds and information dissemination. DES/Western provides educational workshop in Western Mass.	Evaluation of educational workskhop by participants and DES Action; evaluation of health education program.	V.3
	Dept. of Youth Services girls; homeless women and children in shelter care; Hispanic and Portugese women.	Workshops on gynecological/ reproductive health problems and prevention.	Client profile and provider reports.	

TABLE 25
TYPES OF SERVICES TO BE PROVIDED AND INDIVIDUALS TO BE SERVED

Program	Categories or Characteristics of Individuals to be Served	Services Provided	Data	Goal/Objective
Occupational Health/Office Workers	Approximately 2,000 office workers in both worksites and community education programs.	Educational workshops and techical assistance on health and safety issues (ergonomic, job design, and effects of automation) affecting office workers. Offered in workplaces community schools and job training programs.	Evaluation of effectiveness of workshops in increasing knowledge on topics coverage.	V.4
Occupational Health	Sample of industries in Massachusetts	Analysis of reproductive protection policies in Massachusetts through survey and study.	Survey analysis.	V.4
Womens Health and Learning Center	Approximately 900 women imprisoned (and post-release) in Massachusetts Corrrectional Institutions.	Health education workshops, individual and group counseling and clinical consultation.	Evaluation of effectiveness of services in increasing knowledge on topics covered.	V.4

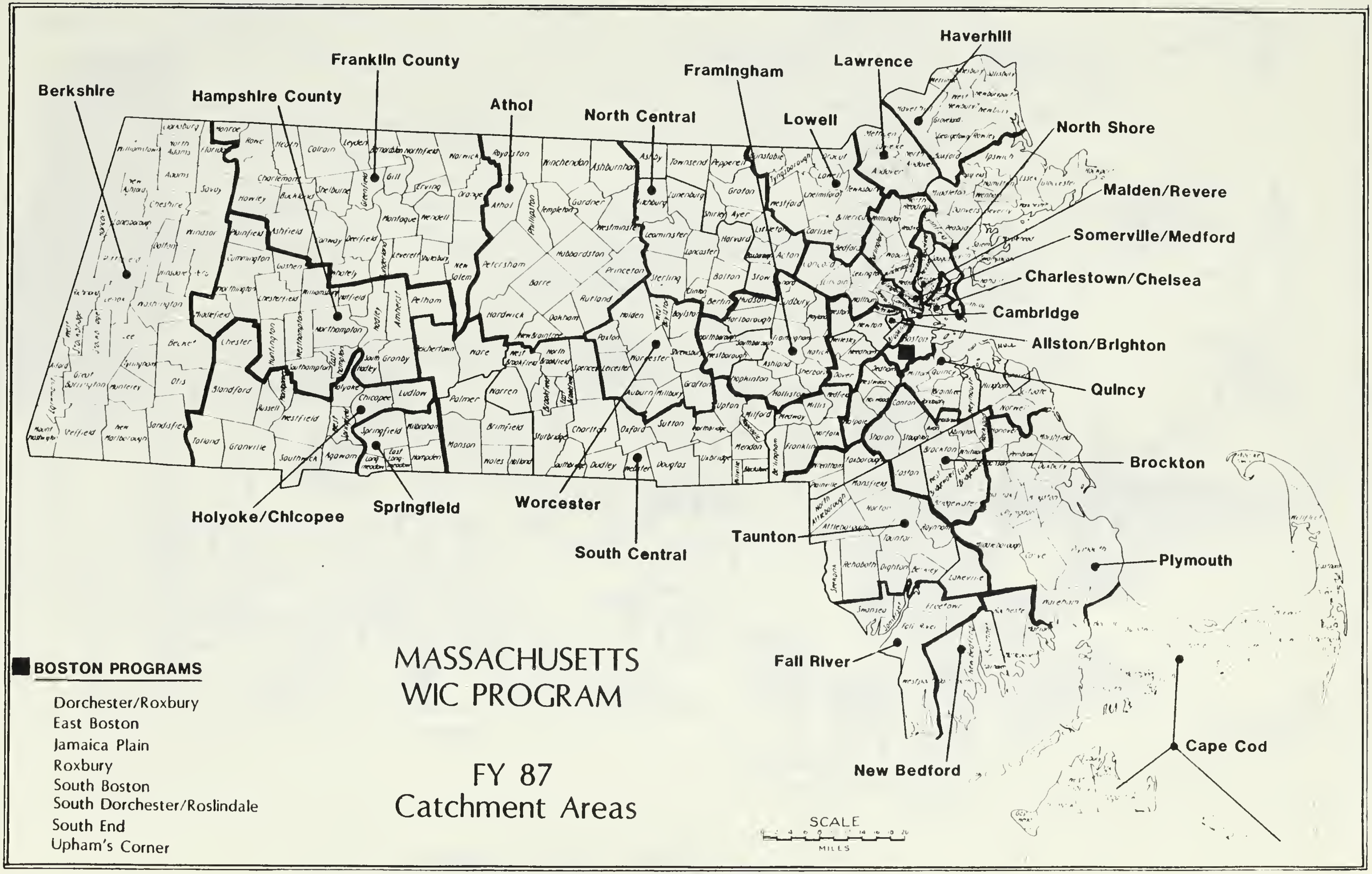
The geographical locations of program and project sites of services described above are shown on the following set of maps:

Figure 29. WIC Programs
Figure 30. Primary Care Programs
Figure 31. Adolescent Pregnancy and Health
Figure 32. Perinatal and Preschool Health
Figure 33. SCIPP Local Projects (forthcoming)
Figure 34. MCH Lead Paint Poisoning Prevention Projects
Figure 35. Services for Handicapped Children Specialty Clinic Sites
Figure 36. Early Childhood Development Services
Figure 37. Early Intervention Program
Figure 38. Community Services for the Multiply Handicapped
Figure 39. Women's Health Services

A number of the services described earlier are not shown on the maps. Some of these are statewide services or payment for 2 services programs used by highly-specified groups (e.g. epilepsy drugs) and handled through our central or regional offices. Others, such as the SIDS, hearing aid and hearing evaluation programs are available statewide through highly-diversified sources (e.g. community-health nurses in over 20 home-health agencies and hearing-evaluation centers across the state.)

A close inspection of these service-area maps will reveal some differences from the needs assessment maps displayed earlier. In some instances, the lack of service sites in high-need areas reflects the gap between the Division's combined state and federal budgets and the enormity of unmet need. In other cases, principally in the areas of primary care and specialty clinics, the locations of service sites have strong historical precedents which have not always been shifted as population characteristics and the availability of private sector services have changed. Needs assessments completed for primary-care programs, lead and WIC have led to the location of more program sites in high-need areas, and the recently-initiated assessment of Services For Handicapped Children's clinics should result in improved targeting of these services to populations in need.

Figure 29



MASSACHUSETTS
WIC PROGRAM

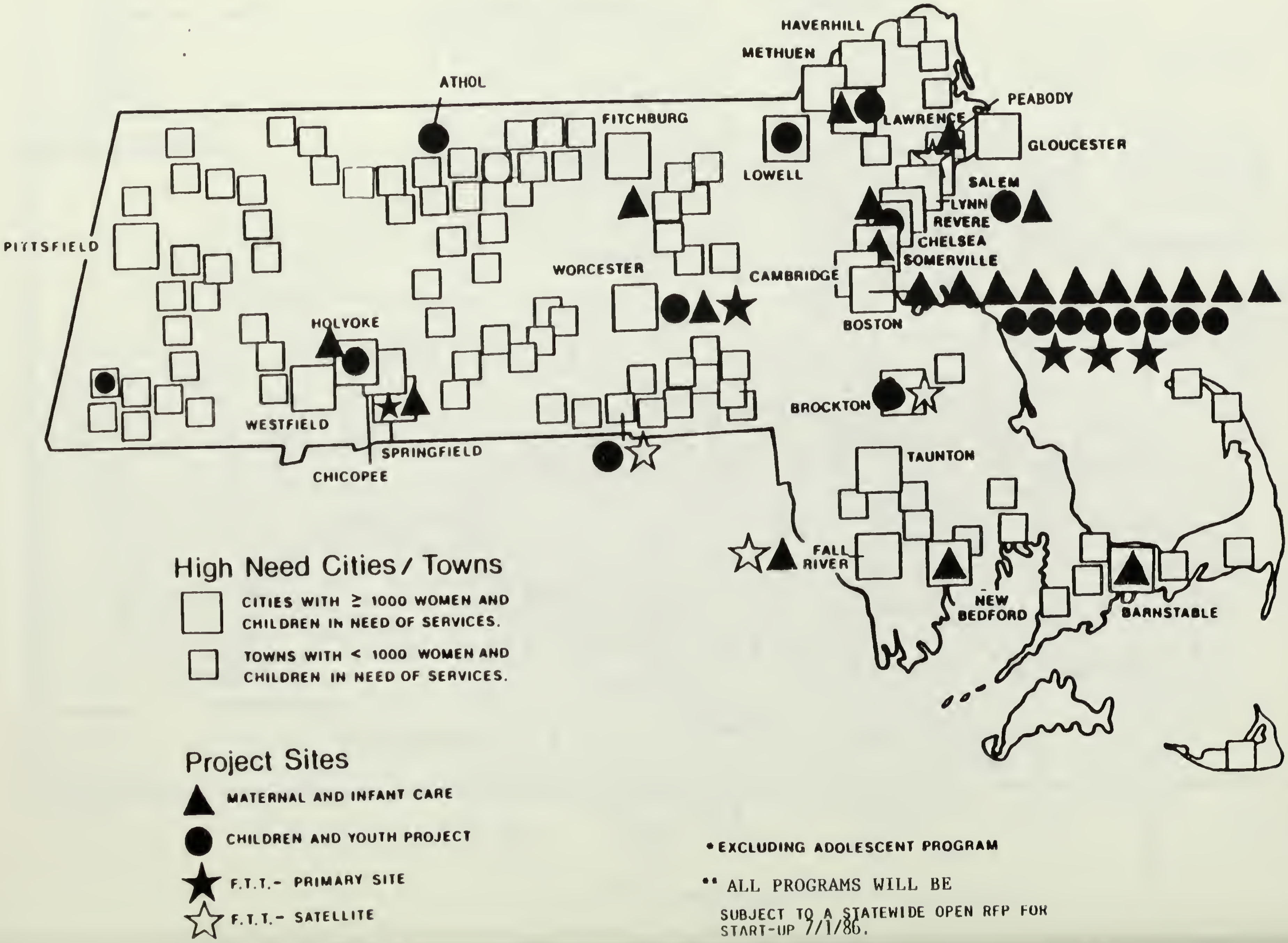
FY 87
Catchment Areas

■ **BOSTON PROGRAMS**

Dorchester/Roxbury
East Boston
Jamaica Plain
Roxbury
South Boston
South Dorchester/Roslindale
South End
Upham's Corner

Figure 30

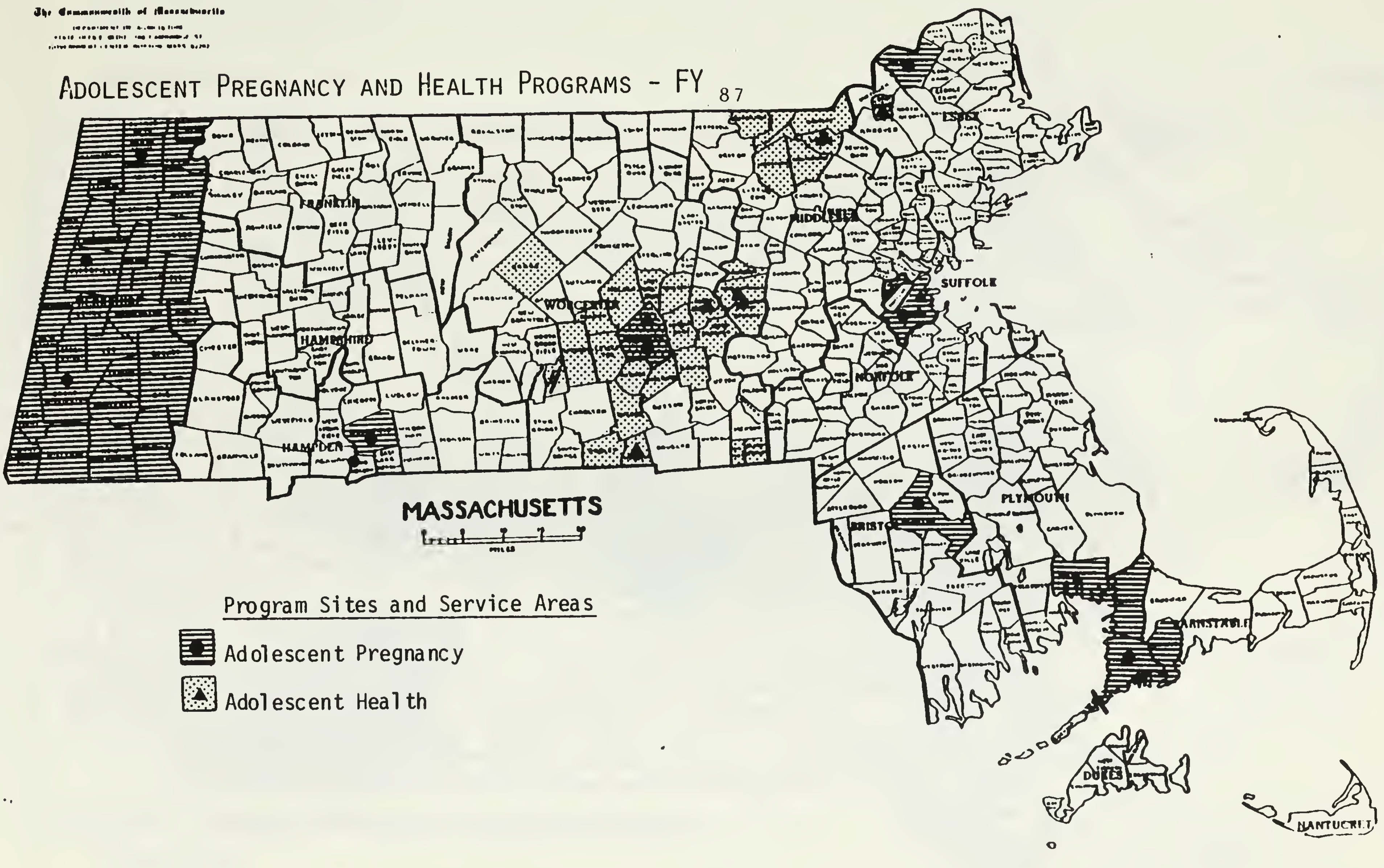
FY 87 PRIMARY CARE SITES * **



* EXCLUDING ADOLESCENT PROGRAM

** ALL PROGRAMS WILL BE SUBJECT TO A STATEWIDE OPEN RFP FOR START-UP 7/1/86.

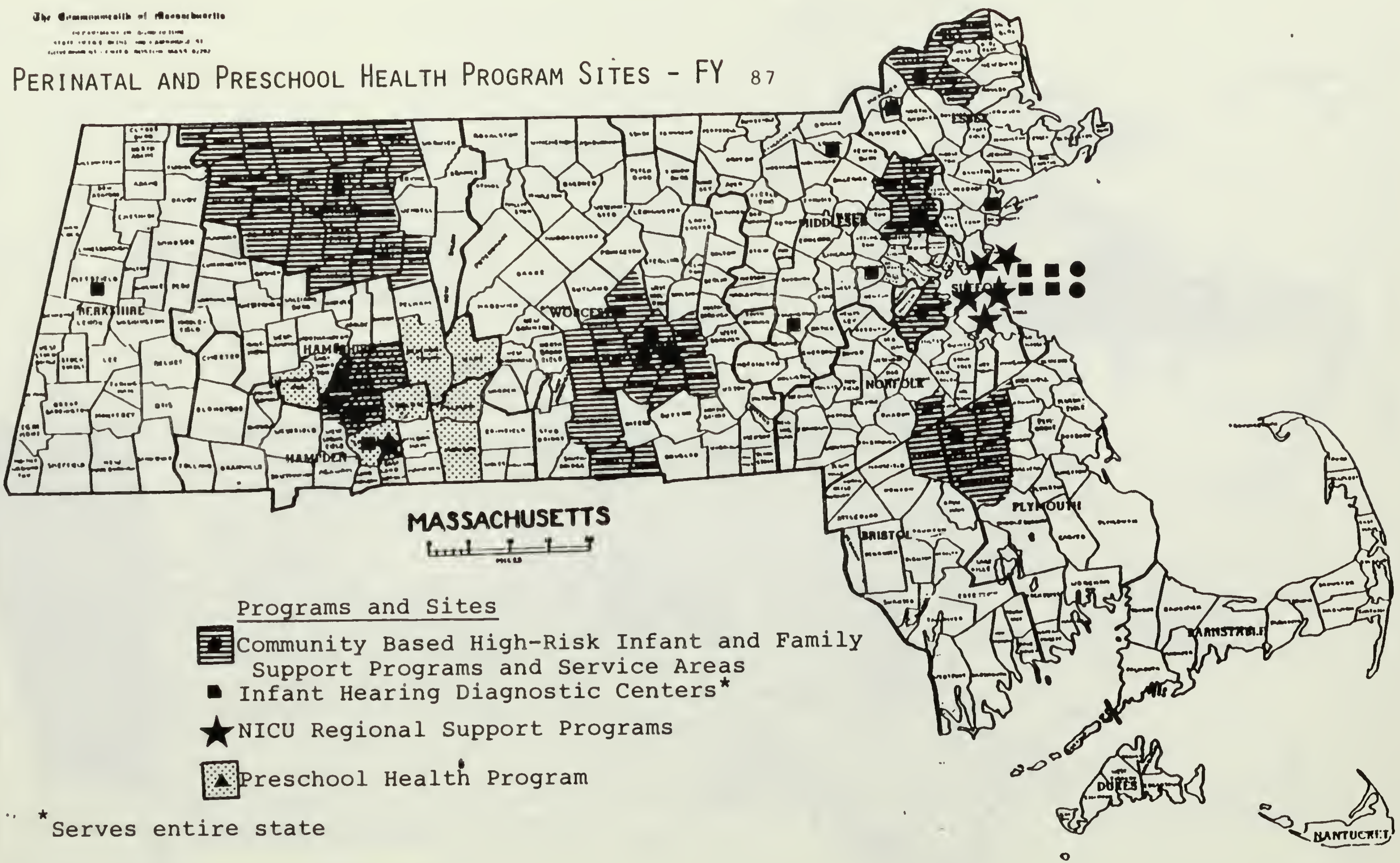
FIGURE 31



ADOLESCENT PREGNANCY AND HEALTH PROGRAMS - FY 87

Figure 32

PERINATAL AND PRESCHOOL HEALTH PROGRAM SITES - FY 87



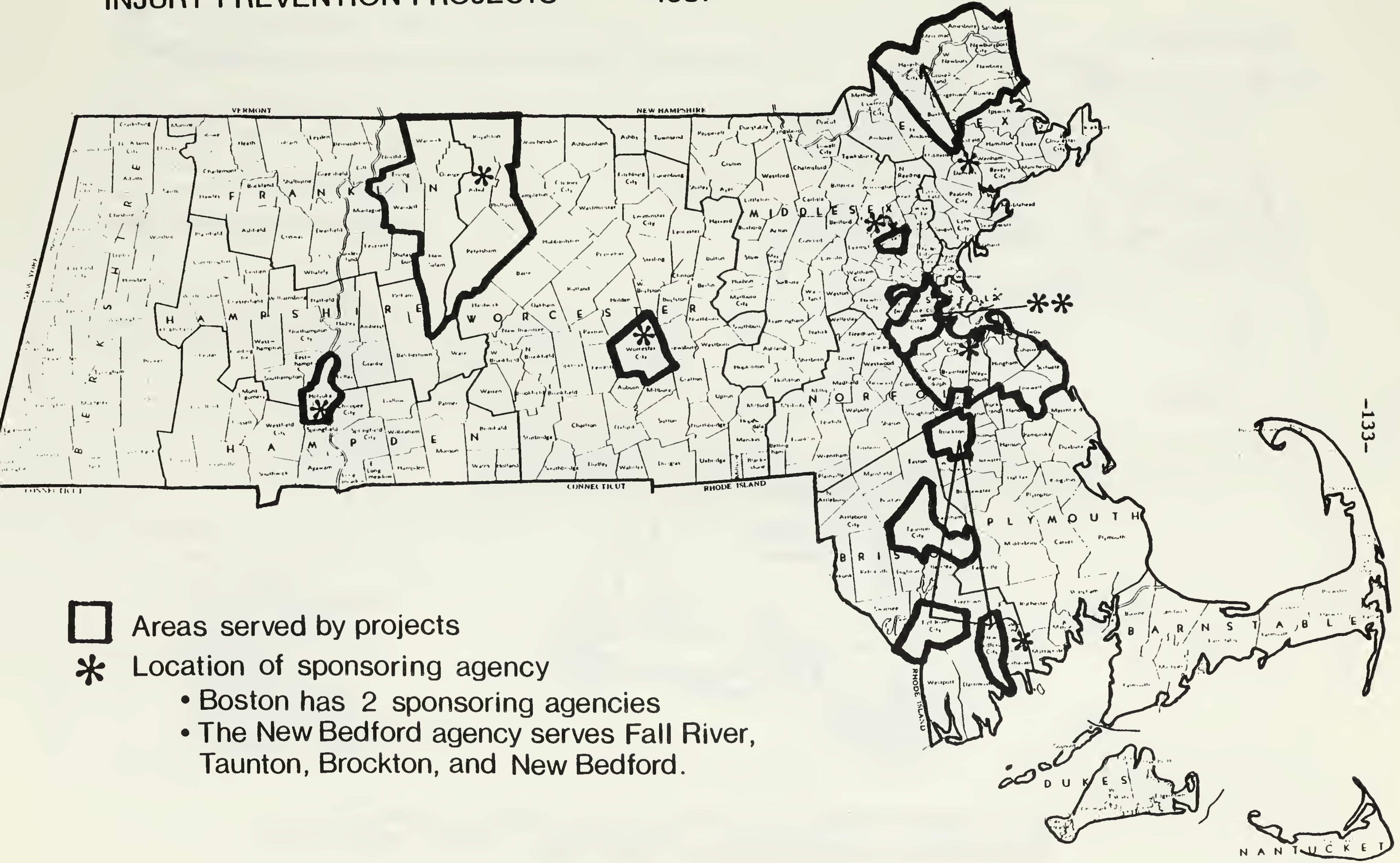
Programs and Sites

- ▤ Community Based High-Risk Infant and Family Support Programs and Service Areas
- ■ Infant Hearing Diagnostic Centers*
- ★ NICU Regional Support Programs
- ▲ Preschool Health Program

*Serves entire state

Figure 33

SCIPP- SITES OF NINE LOCAL COMPREHENSIVE INJURY PREVENTION PROJECTS 1987



☐ Areas served by projects

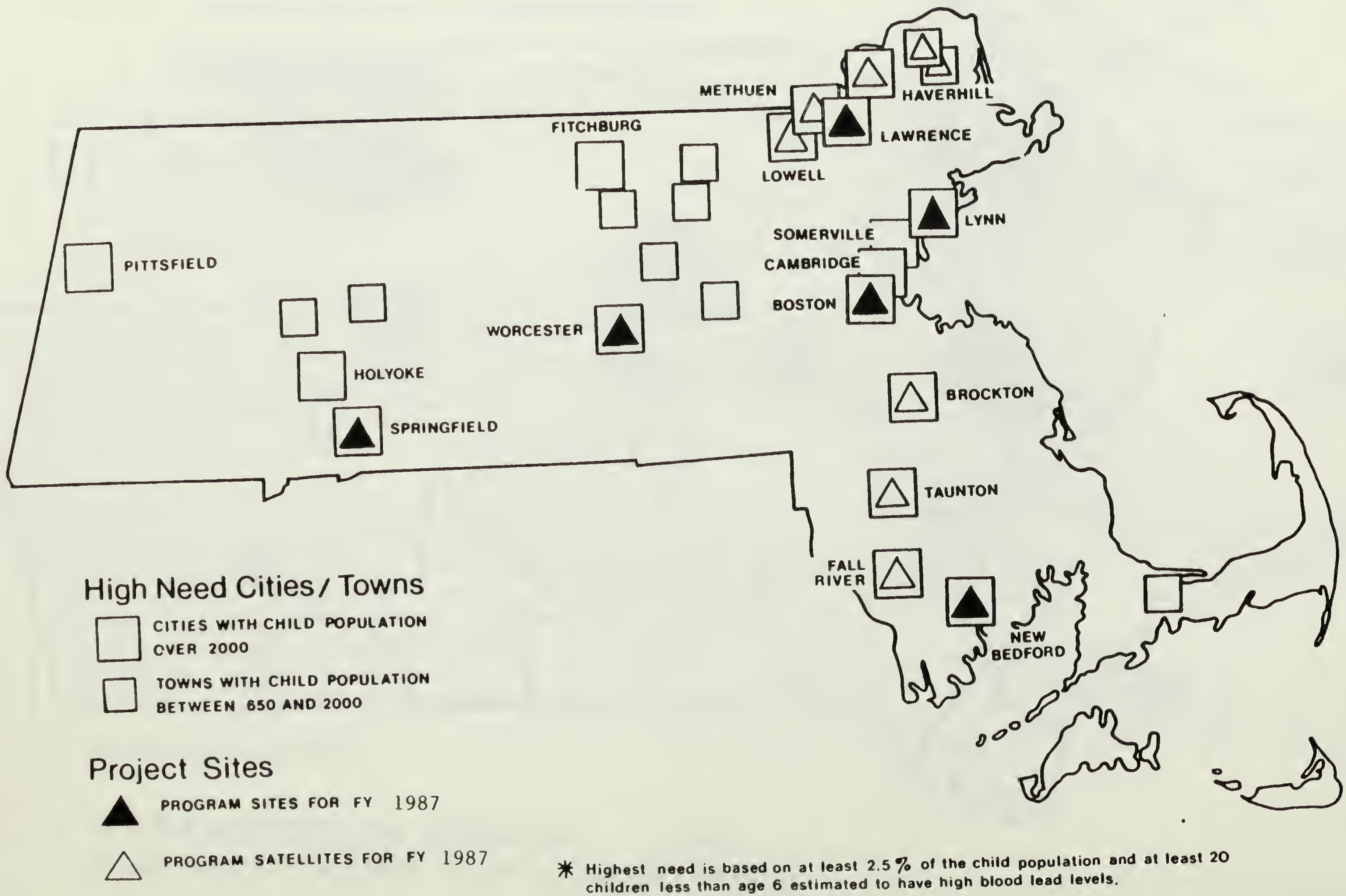
* Location of sponsoring agency

- Boston has 2 sponsoring agencies
- The New Bedford agency serves Fall River, Taunton, Brockton, and New Bedford.

Figure 34

MCH LEAD PAINT POISONING PREVENTION PROJECTS

....CITIES/TOWNS WITH THE HIGHEST NEED* FOR SERVICES AND PROGRAM SITES FOR FY 1987



* Highest need is based on at least 2.5 % of the child population and at least 20 children less than age 6 estimated to have high blood lead levels.

Figure 35

SERVICES FOR HANDICAPPED CHILDREN SPECIALTY CLINIC SITES - 87

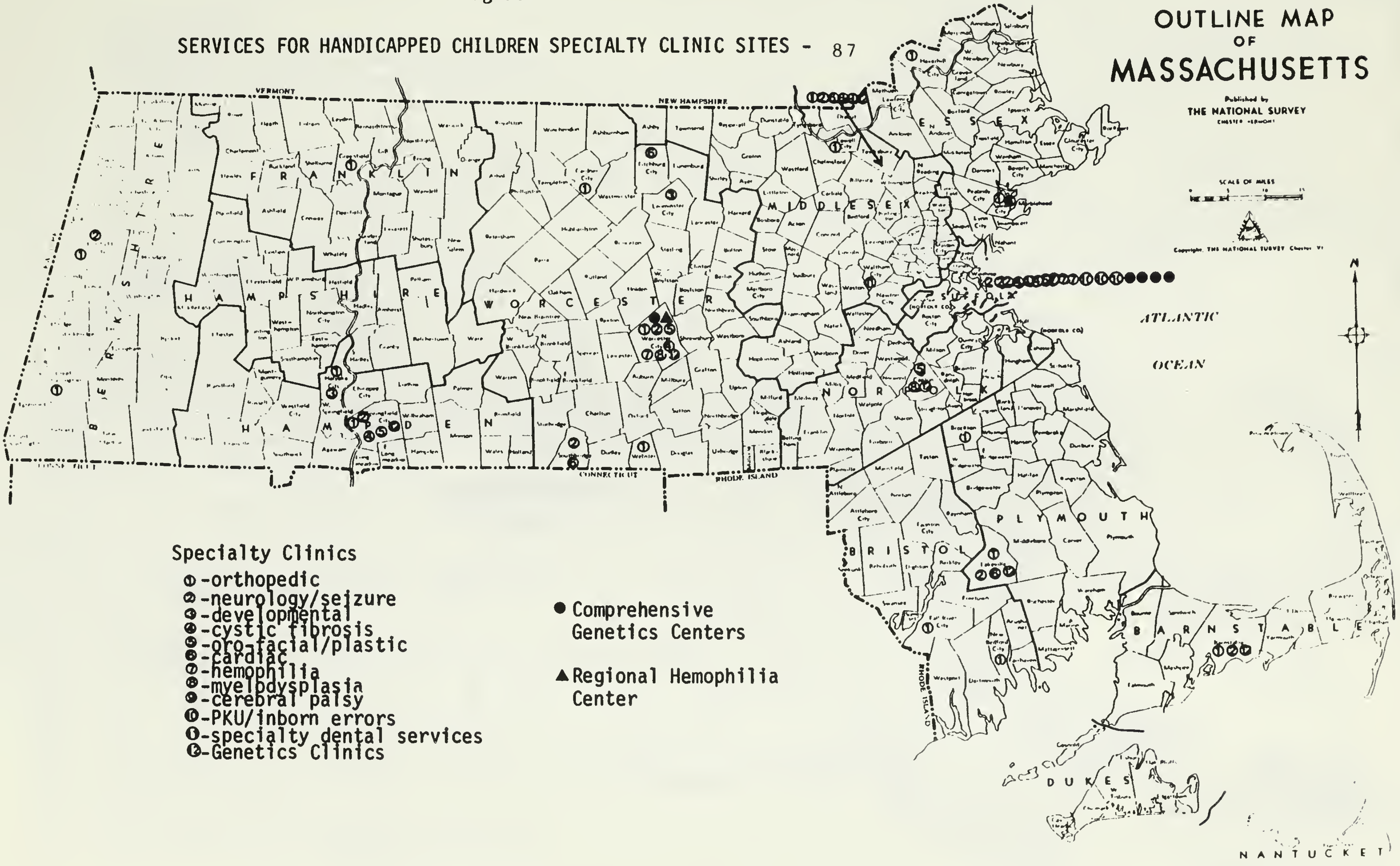
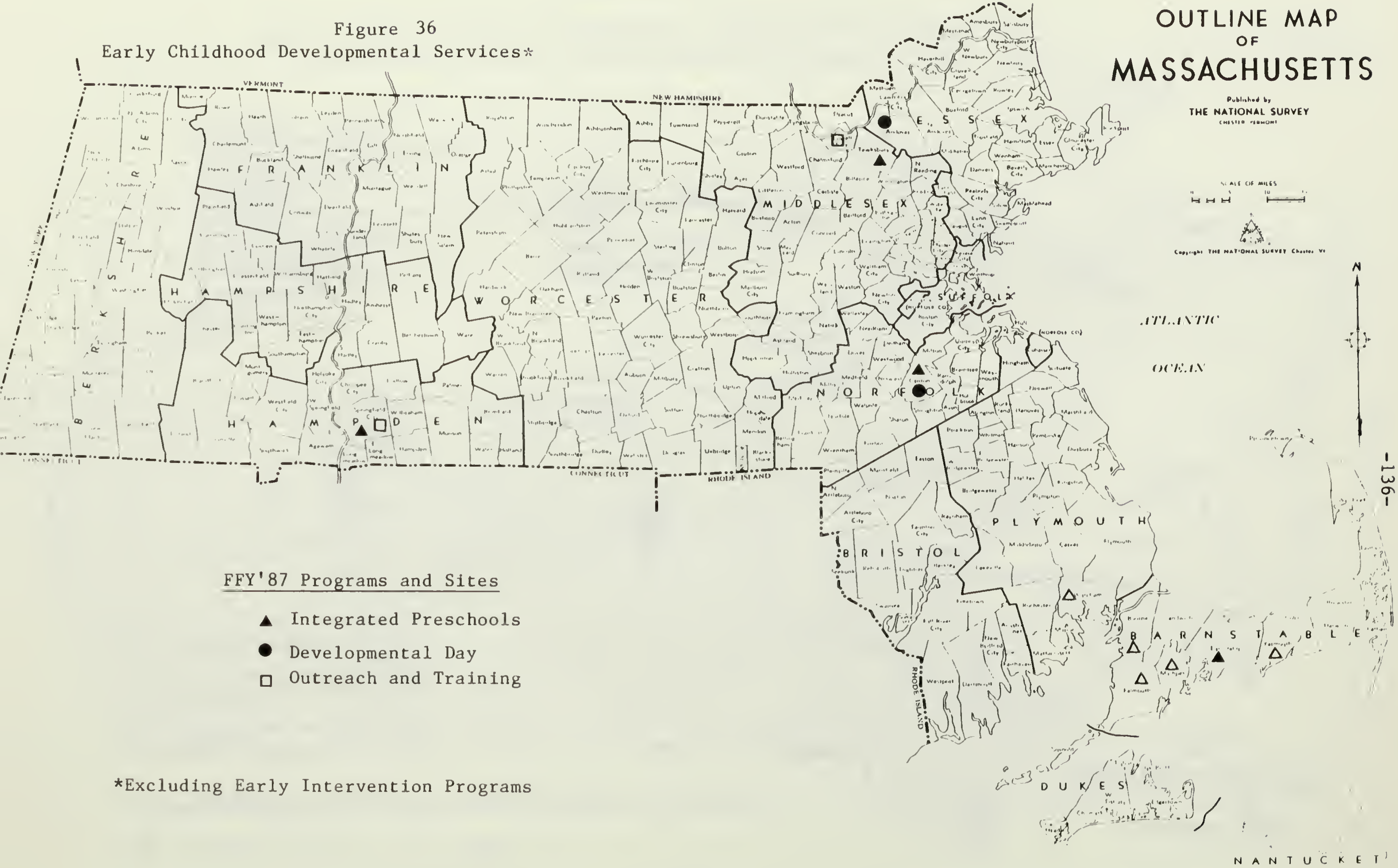


Figure 36
Early Childhood Developmental Services*

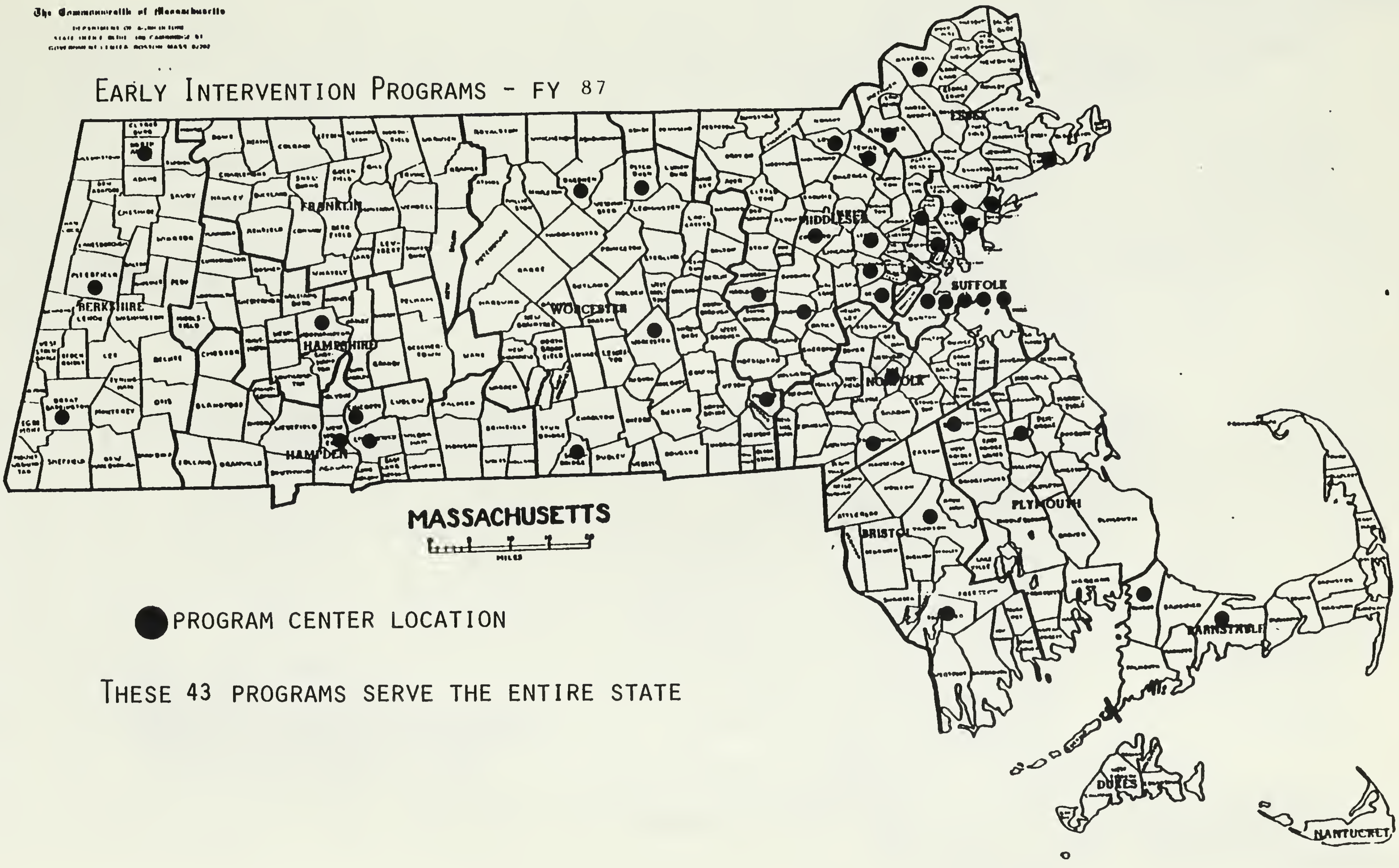


FFY'87 Programs and Sites

- ▲ Integrated Preschools
- ● Developmental Day
- ☐ Outreach and Training

*Excluding Early Intervention Programs

Figure 37

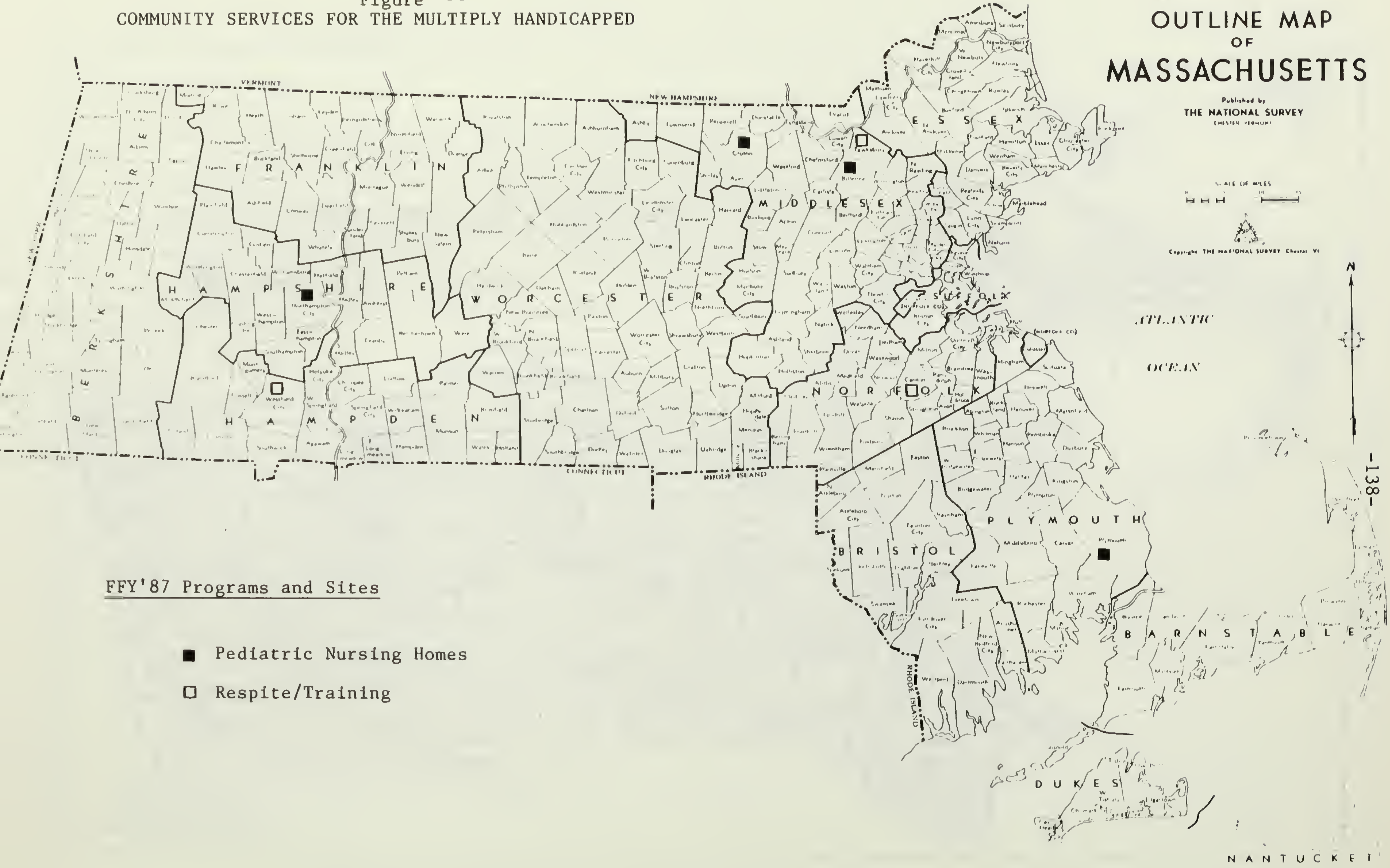


EARLY INTERVENTION PROGRAMS - FY 87

● PROGRAM CENTER LOCATION

THESE 43 PROGRAMS SERVE THE ENTIRE STATE

Figure 38
COMMUNITY SERVICES FOR THE MULTIPLY HANDICAPPED



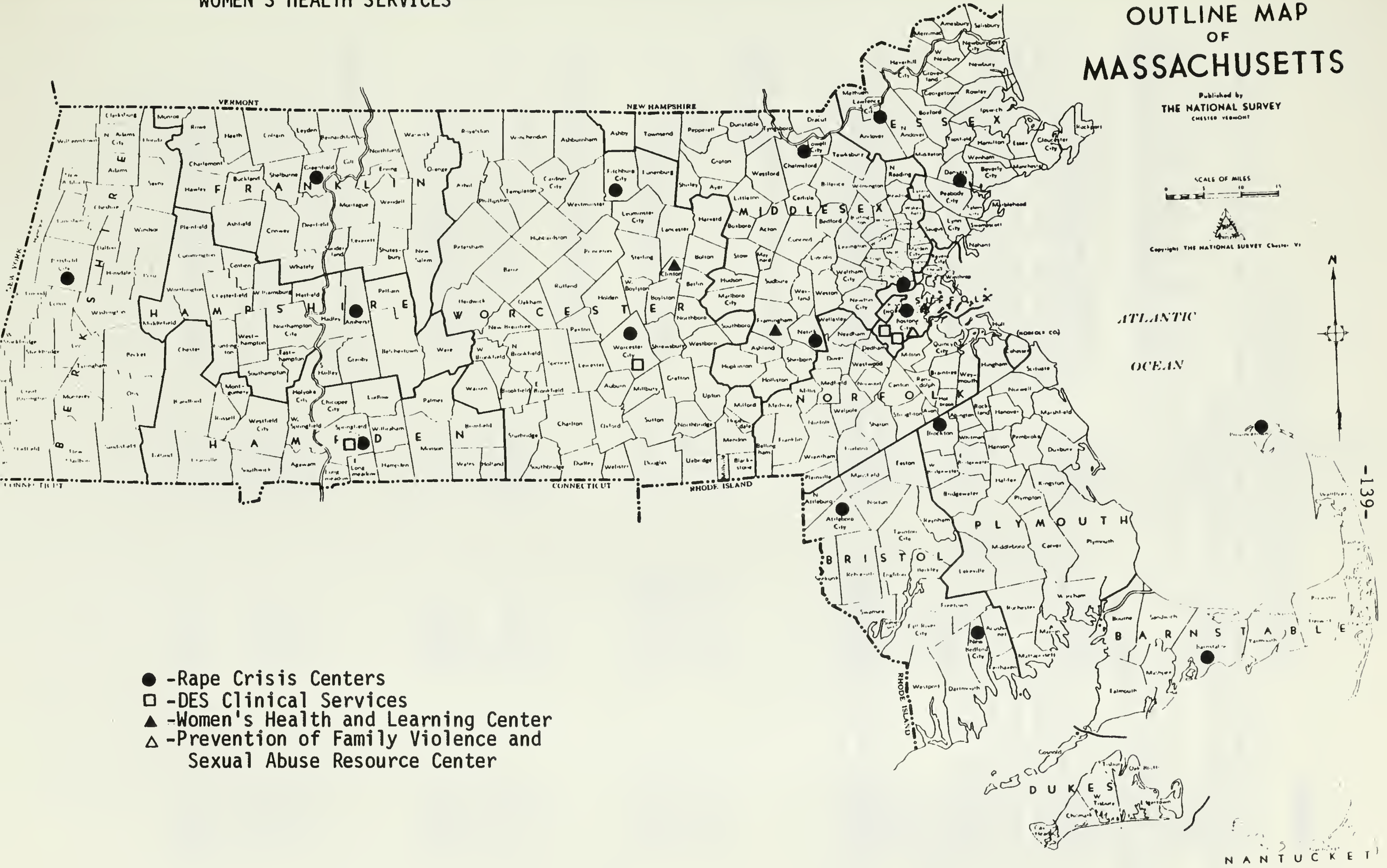
FFY'87 Programs and Sites

■ Pediatric Nursing Homes

☐ Respite/Training

Figure 39

WOMEN'S HEALTH SERVICES



● -Rape Crisis Centers
□ -DES Clinical Services
▲ -Women's Health and Learning Center
△ -Prevention of Family Violence and Sexual Abuse Resource Center

VI. BUDGET

The following section provides information on the allocation of resources among and within program areas.

Table 26 presents the allocation of funds by programmatic unit in the Division in FFY 1987. State and federal proportions of these budgets are delineated.

In accordance with Section 503(a), the Commonwealth of Massachusetts is to provide in effect, three-sevenths (42.8%) of the total sums expended in carrying out the purpose of the Maternal and Child Health Services Program. With an anticipated FFY 1987 Federal MCH appropriation of $9.2 million, and estimated State FY 1986 appropriation of at least $23.5 million, the state proportion of funds will be approximately 72%, thereby exceeding the required match.

Table 27 lists contracted programs of the Division in FFY 1986 by Health Service Area (HSA). This table will be updated with contract amounts for FFY 1987 in the final draft of this document.

Table 26
DIVISION OF FAMILY HEALTH SERVICES
FFY '87 ESTIMATED UNIT BUDGETS[1]

	STATE	FEDERAL	TOTAL
STATISTICS & EVALUATION UNIT			
- Personnel	54,000	695,000	749,000
- Division Support Share		46,786	46,786
UNIT TOTAL	54,000	741,786	795,786
POLICY OFFICE			
- Policy and Planning	17,748	60,883	78,631
- Inf. & Education	-0-	66,500	66,500
- Office of Nutrition	127,288	35,780	163,068
- 1985 Child Death Study	70,678	-0-	70,678
- Division Support Share		10,674	10,674
UNIT TOTAL	215,714	169,237	384,951
WOMEN, INFANTS AND CHILDREN (WIC) UNIT			
- Administration	2,046,740	5,447,828	7,494,568
- Food	4,895,135	21,499,255	26,394,390
- Division Support Share		1,814,047	1,814,047
UNIT TOTAL	6,941,875	28,761,129[2]	35,703,004
PERINATAL AND GENETICS UNIT			
- Genetics	175,000	29,000	201,000
- High Risk Infant	944,282	490,600	1,424,882
- Perinatal Initiatives	255,500	-0-	255,500
- Prenatal Care Survey	-0-	218,000[3]	218,000
- Division Support Share		49,654	49,654
UNIT TOTAL	1,374,282	787,254	2,161,536
PRESCHOOL & SCHOOL HEALTH UNIT			
- School Health	162,762	47,000	209,762
- Preschool Health	185,603	188,874[4]	374,450
- Injury Prevention	309,561	510,631[5]	820,192
- Lead Poisoning Prevention	665,569	576,834	1,242,403
- Special Needs	231,195		231,195
- Division Support Share		89,084	89,084
UNIT TOTAL	1,554,690	1,412,396	2,967,086

Table 26
DIVISION OF FAMILY HEALTH SERVICES
FFY '87 ESTIMATED UNIT BUDGETS[1]

	STATE	FEDERAL	TOTAL
WOMEN'S HEALTH UNIT			
- Reproductive Health	95,000	-0-	95,000
- Prison Women's Health	68,000	-0-	68,000
- Office Worker's Program	-0-	25,000	25,000
- Rape and Family Violence Program	552,000	163,000	715,000
- Division Support Share		12,656	12,656
UNIT TOTAL	715,000	200,656[6]	915,656
PRIMARY CARE UNIT			
- Health Start	14,960,000	-0-	14,960,000
- Pediatric (C&Y)	565,928	650,532	1,216,460
- Prenatal (MIC)	1,252,921	144,027	1,396,948
- Prenatal/Pediatric	1,082,224	179,395	1,261,619
- Adolescent Health and Pregnancy	995,961	479,864	1,475,825
- Failure To Thrive	453,440		453,440
- Division Support Share		97,869	97,869
UNIT TOTAL	19,310,474	1,551,687	20,862,161
EARLY CHILDHOOD DEVELOPMENTAL SERVICES UNIT			
- Early Intervention Services and Transportation	8,856,546	1,705,708[7]	10,562,254
- Developmental Day Care	174,937		174,937
- Training & Respite	376,348		376,348
- Integrated Preschool	464,307		464,307
- Division Support Share		114,826	114,826
UNTI TOTAL	9,872,138	1,820,534	11,692,672
CLINICAL SERVICES UNIT			
- Personnel	496,248	1,811,769	2,308,017
- Medical & Specialist Consultation	335,000	150,000	485,000
- Purchase of Medical Services	950,000	-0-	950,000
- Barnstable County Services	143,065		143,065
- Division Support Share		132,064	132,064
UNIT TOTAL	1,924,313	2,093,833	4,018,146

Table 26
DIVISION OF FAMILY HEALTH SERVICES
FFY '87 ESTIMATED UNIT BUDGETS[1]

	STATE	FEDERAL	TOTAL
CASE MANAGEMENT SERVICES UNIT			
- Personnel	-0-	840,345	840,345
- Division Support Share		56,571	56,571
UNIT TOTAL	-0-	896,916	896,916
COMMUNITY SERVICES UNIT			
- Residential Programs	300,000	-0-	300,000
- Medical Review Team	35,000	65,000	100,000
- Home Health Care	468,000	65,000	533,000
- Residential Respite	48,000	7,000	55,000
- Camperships	-0-	100,000	100,000
- Recruitment Plus Project[8]		59,000	59,000
- Division Support Share		19,926	19,926
UNIT TOTAL	851,000	315,926	1,166,926
TOTALS	42,813,486	38,751,354[9]	81,564,840

[1] Administrative and support costs within units apportioned to programs.

[2] Estimated WIC appropriation of $26.9 million from U.S. Department of Agriculture.

[3] Federal MCH Special (SPRANS) grant.

[4] Includes Federal MCH Special (SPRANS) grant at $118,750 for Family Day Care Health Improvement Project.

[5] Includes Federal MCH Special (SPRANS) grant of $300,000 for Statewide Comprehensive Injury Prevention Program (SCIPP) and $42,000 of Federal Department of Transportation funds.

[6] Includes $182,283 from the Preventive Health and Health Services Block Grant.

[7] Estimated funding from P.L. 89-313 (Title I) Department of Education funds for early intervention.

[8] Includes projected federal grant of $44,000 for Recruitment Plus Project.

[9] Unless otherwise noted federal funding derived from MCH Block Grant at projected FFY '87 level of $9,178,317.

TABLE 27
FY 1987 PURCHASE OF SERVICE CONTRACTS BY HEALTH SERVICES AREAS[1]

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT[2]
HSA I				
1.	Chicopee V.N.A.	Chicopee	High Risk Infant	26,923
2.	Holyoke V.N.A.	Holyoke	High Risk Infant	41,814
3.	Mercy Hospital	Springfield	High Risk Infant	25,045
4.	V.N.H.S. Franklin County	Greenfield	High Risk Infant	29,106
5.	Hillcrest Hospital	Pittsfield	WIC	165,783
6.	Hampshire County Home Care Services, Inc.	Northampton	WIC	105,675
7.	Human Resource Center for Rural Communities, Inc.	Athol	WIC	98,701
8.	Valley Opportunity Council, Inc.	Chicopee	WIC	361,561
9.	V.N.H.S. Franklin County	Greenfield	WIC	111,036
10.	Family Planning Council of Western MA	Northampton	WIC	201,744
11.	The Providence Hospital, Inc.	Holyoke	Prenatal (MIC)	144,560
12.	Baystate Medical Center	Springfield	Prenatal (MIC)	143,269
13.	Children's Health Program	Great Barrington	Pediatric (C & Y)	119,048
14.	Holyoke Health Center	Holyoke	Pediatric (C & Y)	86,619
15.	Human Resource Center for Rural Communities, Inc.	Athol	Pediatric (C & Y)	29,290
16.	U.C.P. of Western MA	Springfield	Early Intervention	336,664
17.	U.C.P. of Western MA	Springfield	PL 89-313 (EI)	137,520
18.	Children's Health Program	Great Barrington	Early Intervention	45,707
19.	Children's Health Program	Great Barrington	PL 89-313 (EI)	31,680
20.	Pediatric Development Center	Pittsfield	Early Intervention	168,071
21.	Pediatric Development Center	Great Barrington	PL 89-313 (EI)	54,720
22.	N. Berkshire Mental Health Assoc.	North Adams	Early Intervention	119,686
23.	N. Berkshire Mental Health Assoc.	North Adams	PL 89-313 (EI)	42,480
24.	Franklin/Hampshire Comm. Ment. Health	Northampton	Early Intervention	302,850
25.	Franklin/Hampshire Comm. Ment. Health	Northampton	PL 89-313 (EI)	91,440
26.	Pioneer Development Center	Chicopee	Early Intervention	191,335
27.	Pioneer Development Center	Chicopee	PL 89-313 (EI)	59,040
28.	Douglas A. Thom Clinic	Westfield	Early Intervention	173,419

---

[1] Includes all state and federally funded services administered by the Division of Family Health Services.

[2] Projected 12-month equivalent of FY '87 contracts as of August 1986.

FY 1987 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
	HSA I (cont'd)			
29.	Douglas A. Thom Clinic (Infant Toddler Intervention Program)	Westfield	PL 89-313 (EI)	61,200
30.	Douglas A. Thom Clinic (Eastern Mountain Center	Springfield	Outreach & Training	55,456
31.	Douglas A. Thom Clinic (Eastern Mountain Center)	Springfield	Integrated Preschool	120,300
32.	Preschool Enrichment Team	Holyoke	Preschool Health	185,603
33.	Housing Allowance Project, Inc.	Springfield	Lead Poisoning Prevention	17,400
34.	V.N.A. of Springfield, Inc.	Springfield	Lead Poisoning Prevention	59,001
35.	C.A.N. - Be, Inc.	Pittsfield	PPAP	107,987
36.	Family Planning Council of Western MA	Northampton	PPAP	102,936
37.	Holyoke - Chicopee Area Health Resources, Inc.	Holyoke	PPAP	41,444
38.	Baystate Medical Center	Springfield	Failure to Thrive	81,120
39.	Baystate Medical Center	Springfield	NICU	46,800
40.	Rape Crisis Center of Berkshire County, Inc.	Pittsfield	Rape Crisis	38,074
41.	N.E. Learning Center for Women in Transition, Inc. (NELCWIT)	Greenfield	Rape Crisis	28,161
42.	Hotline to End Rape and Abuse, Inc. (HERA)	Springfield	Rape Crisis	44,076
43.	UMass - Everywoman's Center	Amherst	Rape Crisis	27,030
			TOTAL HSA I	$4,461,374
	HSA II			
1.	Pernet Family Health Services	Worcester	High Risk Infant	92,224
2.	Harrington Memorial Hospital	Southbridge	WIC	186,056
3.	Pro Health	Fitchburg	WIC	124,592
4.	Family Health & Social Service Center	Worcester	WIC	173,680
5.	U. of Mass. Medical Center	Worcester	Pediatric (C & Y)	62,850
6.	Leominster Hospital	Leominster	Prenatal (MIC)	43,264
7.	Family Health & Social Service Center	Worcester	Prenatal (MIC) & Pedi. (C & Y)	109,296
8.	Herbert Lipton Comm. Ment. Health Ctr.	Fitchburg	Early Intervention	211,208
9.	Herbert Lipton Comm. Ment. Health Ctr.	Fitchburg	PL 89-313 (EI)	37,440
10.	U. of Mass. Medical Center	Worcester	Early Intervention	266,190

FY 1987 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
HSA II (cont'd)			
11. U. of Mass. Medical Center	Worcester	PL 89-313 (EI)	82,800
12. North Central Human Services	Gardner	Early Intervention	54,573
13. North Central Human Services	Gardner	PL 89-313 (EI)	25,920
14. Harrington Memorial Hospital	Southbridge	Early Intervention	90,252
15. Harrington Memorial Hospital	Southbridge	PL 89-313 (EI)	36,000
16. U. of Mass. Medical Ctr. Group Practice	Worcester	SHC Clinics/Doctors' Services	40,000
17. City of Worcester	Worcester	Lead Poisoning Prevention	56,533
18. Health Awareness of Central MA	Worcester	PPAP	265,076
19. Health Information Referral Service	Marlborough	PPAP	63,216
20. University of Massachusetts	Worcester	Failure to Thrive	64,117
21. Worcester Memorial Hospital	Worcester	Neonatal Int. Care Reg. Dev.	53,195
22. Rape Crisis Program of Worcester, Inc.	Worcester	Rape Crisis	43,264
23. LUK, Crisis Center, Inc.	Fitchburg	Rape Crisis	16,217
		TOTAL HSA II	$2,197,963
HSA III/VI			
1. V.N.A. of North Shore, Inc.	Danvers	High Risk Infant	58,211
2. Community Action, Inc.	Haverhill	WIC	152,464
3. Greater Lawrence Community Action	Lawrence	WIC	133,049
4. Community Team Work, Inc.	Lowell	WIC	170,697
5. Lynn Community Health, Inc.	Lynn	WIC	293,925
6. The Malden Hospital	Malden	WIC	115,611
7. Lowell Comm. Health Ctr., Inc.	Lowell	Pediatrics (C & Y)	111,945
8. Lynn Community Health, Inc.	Lynn	Prenatal (MIC) & Pedi. (C & Y)	171,770
9. Greater Lawrence Family Health Center	Lawrence	Pediatrics (C & Y)	83,959
10. Greater Lawrence Family Health Center	Lawrence	Prenatal (MIC)	60,873
11. U.C.P. of North Shore	Lynn	Early Intervention	214,405
12. U.C.P. of North Shore	Lynn	PL 89-313 (EI)	59,760
13. N.E. Memorial Hospital	Stoneham	Early Intervention	115,929
14. N.E. Memorial Hospital	Stoneham	PL 89-313 (EI)	43,920
15. Haverhill/Newburyport Human Services	Haverhill	Early Intervention	134,098
16. Haverhill/Newburyport Human Services	Haverhill	PL 89-313 (EI)	36,000
17. U.C.P. of North Shore	Danvers-Salem	Early Intervention	65,541
18. U.C.P. of North Shore	Danvers-Salem	PL 89-313 (EI)	28,800

FY 1987 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
	HSA III/VI (cont'd)			
19.	Center for the Dev. of Human Svcs, Inc.	Cape Ann	Early Intervention	52,277
20.	Center for the Dev. of Human Svcs, Inc.	Cape Ann	PL 89-313 (EI)	23,040
21.	Tri-City Community Mental Health & Retardation Association	Malden	Early Intervention	167,009
22.	Tri-City Community Mental Health & Retardation Association	Malden	PL 89-313 (EI)	51,120
23.	Professional Center for Handicapped Children, Inc.	Andover	Early Intervention	177,970
24.	Professional Center for Handicapped Children, Inc.	Andover	PL 89-313 (EI)	45,360
25.	Douglas A. Thom Clinic (Anne Sullivan Center)	Tewksbury	Early Intervention	274,299
26.	Douglas A. Thom Clinic (Anne Sullivan Center)	Tewksbury	PL 89-313 (EI)	75,600
27.	Douglas A. Thom Clinic (Anne Sullivan Center)	Tewksbury	Outreach & Training	63,005
28.	Douglas A. Thom Clinic (Anne Sullivan Center)	Tewksbury	Integrated Preschool	130,111
29.	Professional Center for Handicapped Children, Inc.	Andover	Developmental Day	110,868
30.	Greater Lawrence Community Action	Lawrence	Lead Poisoning Prevention	263,000
31.	North Shore Children's Hospital	Salem	Lead Poisoning Prevention	55,632
32.	St. John's Hospital	Lowell	PPAP	81,120
33.	Healthworks, A Family Life Resource Ctr.	Lowell	PPAP	101,120
34.	Project RAP, Inc. URSA	Beverly	Rape Crisis	42,870
35.	Greater Lawrence Mental Health Center, Inc.	Lawrence	Rape Crisis	31,184
36.	Rape Crisis Services of Greater Lowell, Inc.	Lowell	Rape Crisis	36,861
37.	North Shore Community Health Center, Inc.	Peabody	Prenatal (MIC)	29,744
			TOTAL HSA III/VI	$3,873,147

FY 1987 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
HSA IV				
1.	Federated Dorchester Neighborhood	Dorchester	High Risk Infant	68,808
2.	Trustees of Health & Hospitals	Boston	High Risk Infant	102,154
3.	Trustees of Health & Hospitals	Boston	Sudden Infant Death Syndrome	161,751
4.	Brigham & Women's Hospital	Boston	WIC	155,584
5.	Cambridge Hospital	Cambridge	WIC	148,304
6.	Harvard St. Neighborhood Health Center	Dorchester	WIC	219,119
7.	Mass. General Hospital (Bunker Hill)	Boston	WIC	138,493
8.	St. Elizabeth's Hospital	Brighton	WIC	150,262
9.	Somerville Hospital	Somerville	WIC	172,537
10.	South End Community Health Center	Boston	WIC	160,025
11.	South Middlesex Opportunity Council, Inc.	Framingham	WIC	121,463
12.	Upham's Corner Health Committee	Dorchester	WIC	224,733
13.	Whittier Street Health Center Comm.	Roxbury	WIC	183,432
14.	Quincy City Hospital	Quincy	WIC	121,114
15.	Neponset Health Center	Dorchester	WIC	161,284
16.	South Boston Community Health Ctr, Inc.	Boston	WIC	101,492
17.	East Boston Comm Health Comm, Inc.	Boston	WIC	68,000
18.	Affiliated Neighborhood Health Centers	Boston	Prenatal (MIC)	43,264
19.	South Cove Community Health Center	Boston	Prenatal (MIC) & Pedi. (C & Y)	183,657
20.	Brigham & Women's Hosp. (Brookside Pk.)	Boston	Prenatal (MIC) & Pedi. (C & Y)	128,066
21.	Mass. General Hospital (Bunker Hill)	Boston	Pediatric (C & Y)	95,819
22.	Mass. General Hospital (Chelsea)	Chelsea	Pediatric (C & Y) & Prenatal	202,659
23.	Roxbury Comp. Comm. Health Center	Roxbury	Prenatal (MIC)	88,055
24.	Jos. M. Smith Comm Health Center	Brighton	Pedi. (C & Y)	104,271
25.	St. Margaret's Hospital	Dorchester	Prenatal (MIC)	87,318
26.	East Boston Neighborhood Hth Ctr.	East Boston	Prenatal (MIC) & Pedi. (C & Y)	179,395
27.	Harvard St. Neighborhood Health Center	Dorchester	Prenatal (MIC)	184,534
28.	Harvard St. Neighborhood Health Center	Dorchester	Pediatric (C & Y)	167,919
29.	Whittier St. Health Center	Boston	Prenatal (MIC) & Pedi. (C & Y)	138,171
30.	Upham's Corner Health Center	Boston	Prenatal (MIC)	83,246
31.	Children's Hosp. Corp. (Martha Eliot)	Boston	Prenatal (MIC) & Pedi. (C & Y)	351,264
32.	Somerville Hospital	Somerville	Prenatal (MIC)	119,088
33.	St. Elizabeth's Hospital	Brighton	Prenatal (MIC)	55,972
34.	Minuteman A.R.C.	Concord	Early Intervention	154,513
35.	Minuteman A.R.C.	Concord	PL 89-313 (EI)	55,440

FY 1987 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
HSA IV (cont'd)				
36.	Kennedy Center for Handicapped Children	Foxboro	Early Intervention	107,920
37.	Kennedy Center for Handicapped Children	Foxboro	PL 89-313 (EI)	39,600
38.	Kennedy Center for Handicapped Children	New Bedford	Early Intervention	145,144
39.	Kennedy Center for Handicapped Children	New Bedford	PL 89-313 (EI)	66,960
40.	Kennedy Center for Handicapped Children	Hanson	Early Intervention	116,858
41.	Kennedy Center for Handicapped Children	Hanson	PL 89-313 (EI)	39,600
42.	Center for the Development of Human Services, Inc.	Milford	Early Intervention	169,673
43.	Center for the Development of Human Services, Inc.	Milford	PL 89-313 (EI)	48,240
44.	Center for the Development of Human Services, Inc.	Framingham	Early Intervention	126,235
45.	Center for the Development of Human Services, Inc.	Framingham	PL 89-313 (EI)	41,040
46.	Bay Cove Human Services	Boston	Early Intervention	144,364
47.	Bay Cove Human Services	Boston	PL 89-313 (EI)	36,720
48.	Coastal Community Counseling Center	Braintree	Early Intervention	38,397
49.	Coastal Community Counseling Center	Braintree	PL 89-313 (EI)	49,680
50.	Dorchester/Mattapan Community Mental Health Center	Dorchester	Early Intervention	121,756
51.	Dorchester/Mattapan Community Mental Health Center	Dorchester	PL 89-313 (EI)	50,400
52.	Roxbury Children's Service, Inc.	Dorchester	Early Intervention	197,948
53.	Roxbury Children's Service, Inc.	Dorchester	PL 89-313 (EI)	25,200
54.	Mental Health Association Marlboro Westboro Area	Marlborough	Early Intervention	67,108
55.	Mental Health Association Marlboro Westboro Area	Marlborough	PL 89-313 (EI)	41,760
56.	Mental Health & Retardation Center of Cambridge & Somerville	Cambridge	Early Intervention	126,307
57.	Mental Health & Retardation Center of Cambridge & Somerville	Cambridge	PL 89-313 (EI)	66,240
58.	Newton-Needham Mental Health Assn.	Newton	Early Intervention	100,558
59.	Newton-Needham Mental Health Assn.	Newton	PL 89-313 (EI)	74,880
60.	North Suffolk Mental Health Assn.	Chelsea	Early Intervention	113,963
61.	North Suffolk Mental Health Assn.	Boston	PL 89-313 (EI)	46,800
62.	South Norfolk A.R.C.	Norwood	Early Intervention	132,097
63.	South Norfolk A.R.C.	Norwood	PL 89-313 (EI)	39,600

FY 1987 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
	HSA IV (cont'd)			
64.	South Shore Mental Health Center	Quincy	Early Intervention	111,482
65.	South Shore Mental Health Center	Quincy	PL 89-313 (EI)	49,680
66.	Southwest Boston Community Services	Roslindale	Early Intervention	92,580
67.	Southwest Boston Community Services	Roslindale	PL 89-313 (EI)	33,840
68.	The Waltham/Weston Hospital (Metro-Beaverbrook)	Waltham	Early Intervention	109,669
69.	The Waltham/Weston Hospital (Metro-Beaverbrook)	Waltham	PL 89-313 (EI)	44,640
70.	The Waltham/Weston Hospital	Winchester	Early Intervention	141,852
71.	The Waltham/Weston Hospital	Winchester	PL 89-313 (EI)	39,600
72.	Vinfen Corporation	Boston	Early Intervention	128,968
73.	Vinfen Corporation	Boston	PL 89-313 (EI)	33,840
74.	Enable Inc.	Canton	Developmental Day	98,928
75.	Enable Inc.	Canton	Outreach & Training	131,991
76.	Enable Inc.	Canton	Integrated Preschool	47,873
77.	Adaptive Environments, Inc.	Boston	SHC Clinics/Adaptive Housing	100,000
78.	Trustees of Health & Hospitals	Boston	Lead Poisoning Prevention	448,431
79.	The Children's Hospital Corporation	Boston	Risk Information Services	246,561
80.	Trustees of Health & Hospitals	Boston	PPAP	183,120
81.	St. Margaret's Hospital	Dorchester	PPAP	162,240
82.	Brigham & Women's Hospital	Boston	PPAP	179,099
83.	Children's Hospital Corporation	Boston	PPAP	32,448
84.	Children's Hospital Corporation (Martha Eliot Center)	Boston	PPAP	54,353
85.	Trustees of Health & Hospitals	Boston	Failure to Thrive	210,080
86.	Children's Hospital Corporation	Boston	Failure to Thrive	98,123
87.	Trustees of Health & Hospitals	Boston	Neonatal Int. Care Reg. Dev.	35,396
88.	The General Hospital Corp.	Boston	Neonatal Int. Care Reg. Dev.	29,500
89.	Boston Hospital for Women	Boston	Neonatal Int. Care Reg. Dev.	82,597
90.	St. Margaret's Hospital for Women	Boston	Neonatal Int. Care Reg. Dev.	41,300
91.	N.E. Medical Center Hospitals, Inc.	Boston	Neonatal Int. Care Reg. Dev.	36,812
92.	National Birth Defects Center, Inc.	Brighton	Risk Information Services	73,133
93.	Boston YWCA-West Suburban YWCA	Boston	Rape Crisis	30,818
94.	Women's Education Center, Inc.	Cambridge	Rape Crisis	41,597
95.	Roxbury Multi-Service Center	Roxbury	Rape Crisis	41,600
96.	Center for Study of Public Policy	Brighton	Occupational Health Education	18,750
			TOTAL HSA IV	$10,467,155

FY 1987 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

	AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
HSA V				
1.	Brockton V.N.A.	Brockton	High Risk Infants	86,903
2.	Brockton Area Multi-Services	Brockton	WIC	171,557
3.	Citizens for Citizens	Fall River	WIC	161,764
4.	Fall River Comm. Dev. Service Ctr.	Fall River	WIC	183,479
5.	Health Care of Southeastern Mass., Inc.	Abington	WIC	139,984
6.	Health Care of Southeastern Mass., Inc.	Abington	WIC	122,270
7.	Greater New Bedford Comm. Health Center	New Bedford	WIC	191,256
8.	Health Care of Southeastern Mass., Inc.	Hyannis	Prenatal (MIC)	117,907
9.	Fall River Comm. Dev. Service Ctr.	Fall River	Prenatal (MIC)	111,043
10.	Greater New Bedford Comm. Health Center	New Bedford	Prenatal (MIC)	84,211
11.	Brockton Hospital	Brockton	Pedi. (C & Y)	152,086
12.	Cape Cod Child Development Program	Hyannis	Early Intervention	223,775
13.	Cape Cod Child Development Program	Hyannis	PL 89-313 (EI)	38,160
14.	Brockton Area Multi-Services	E. Bridgewater	Early Intervention	189,603
15.	Brockton Area Multi-Services	E. Bridgewater	PL 89-313 (EI)	61,200
16.	People, Inc.	Fall River	Early Intervention	131,433
17.	People, Inc.	Fall River	PL 89-313 (EI)	42,480
18.	Taunton Area Assoc. for Human Services	Taunton	Early Intervention	186,039
19.	Taunton Area Assoc. for Human Services	Taunton	PL 89-313 (EI)	54,000
20.	Cape Cod Child Development Program	Hyannis	Integrated Preschool	108,864
21.	Barnstable County Health Department	Barnstable	Handicapped Children's Clinic	143,065
22.	Health Care of Southeastern Mass., Inc.	Abington	PPAP	101,666
23.	Southeastern Mass. University	Dartmouth	Lead Poisoning Prevention	128,227
24.	New Hope, Inc.	Attleboro	Rape Crisis	28,409
25.	New Bedford Women's Center	New Bedford	Rape Crisis	45,339
26.	Center for Individual and Family Services of Cape Cod	Hyannis	Rape Crisis	32,442
27.	Health Care of Southeastern Mass., Inc.	Abington	Rape Crisis	32,438
			TOTAL HSA V	$3,069,600

FY 1987 PURCHASE OF SERVICE CONTRACTS
BY HEALTH SERVICES AREAS (cont'd)

AGENCY NAME	LOCATION	PROGRAM TYPE	CONTRACT AMOUNT
BLANKET CONTRACTS			
1. Camperships	various towns		81,120
2. V.N.A./Home Health Aides	various towns		222,950
3. Homemaker Services	various towns		11,025
4. Interim Services Funds (SSI)	various towns		20,800
5. Interim Services Funds (Lead)	various towns		35,000
6. Transportation Services (EI)	various towns		963,746
		TOTAL BLANKETS	$1,134,641
		TOTAL CONTRACTS	$25,203,880

VII. ASSURANCES

The Commonwealth of Massachusetts assures the Secretary of the Department of Health and Human Services that the provisions of Section 505 of the Title V - Maternal and Child Health Services Block Grant will be carried out. Each of the provisions of Section 505, with reference to the paragraphs of the legislation, is addressed in the following sections:

505 (2) (A) : Fair method for allocating funds, guidelines, and quality assurances

505 (2) (B) : Restriction of funds to purpose of Title V and prohibitions against discrimination

505 (2) (C) (i) : Expenditure of "substantial" proportion of Title V funds for services and special consideration for special projects

505 (2) (D) : State charges/financial eligibility

505 (2) (E) (iii) : Interagency coordination

505 : Public comment

505 (2)(A)

FAIR ALLOCATION METHOD

The Commonwealth of Massachusetts will provide a fair method for allocating funds allotted under this title among such individuals, areas, and localities identified under paragraph (1) (A) as needing maternal and child health services.

During the first two years of the Block Grant, FFY 1982 and 1983, the Division maintained historical funding patterns to a large degree, making proportional cuts in consolidated health programs when its appropriations were reduced, and restoring some of these funds as appropriations were increased. At the same time, it developed more sophisticated methods for ensuring fair allocation in the future. Methodologies for conducting systematic needs assessments were developed and utilized for the WIC, Primary Care, Lead Paint Poisoning Prevention and Early Intervention Programs in order to target funds to high need areas of the state through open, competitive bidding processes. These needs assessments have been updated periodically and utilized to award contracts on regular three-year cycles, as well as when supplemental or expansion state or federal funds have been awarded.

Between 1983-1986, a needs assessment of the SHC clinic system was conducted as part of a triagency effort, known as Project SERVE. The recommendations derived from this Project will help guide the Division in its allocation of resources for children with special health care needs. Of particular note is Project SERVE's finding that the Boston area is underserved by the current SHC system.

In other program areas where systematic needs assessments have not been conducted, the Division attempted to ensure fair allocation by setting funding goals that would more equitably distribute funds across the state. For example, the goal in the FFY '84 Adolescent Health and Adolescent Pregnancy Request For Proposal was to fund at least one of each program in each of the state's four public health regions, and in the metropolitan Boston area.

The Division anticipates further refinement and application of needs assessment tools that will ensure fair allocation of funds within program areas and which will assist in setting priorities for funding across program areas. Additionally, with the assistance of the FHS Advisory Council, and through other avenues for public participation, the Division is endeavoring to more clearly define priorities which will guide distribution of funds across program areas.

In summary, while retaining its commitment to overall goals of the Maternal and Child Health Block Grant, the Division anticipates moving further from historical and proportional methods for determining allocation of funds to methods which rely on systematic needs assessments to guide allocation of funds within program areas, and on improved policy formulation to guide allocation across program areas.

505 (2)(A)

GUIDELINES AND QUALITY ASSURANCE

The Commonwealth of Massachusetts will identify and apply guidelines for appropriate referral and follow-up with respect to health care assessments and services financially assisted under this Title and methods for assuring quality assessments and services.

The Division of Family Health Services has long been in the forefront of the development of guidelines and standards for the care of mothers, infants, and handicapped children. The Services for Handicapped Children clinics and other related programs operate under written guidelines prepared by the Department which address such issues as eligibility, provider qualifications, service components, responsibilities of team members, confidentiality, and record reviews. A Quality Assurance Program was initiated in FFY 1986 in the SHC clinic system. Recommendations from Project SERVE include emphasis on a stronger role for the Division in quality assurance of services to handicapped children, in the private sector as well as those funded through Medicaid.

All contracted programs offered under this Title are expected to be in compliance with any guidelines and standards recommended by relevant national organizations such as the American Academy of Pediatrics (AAP), American College of Obstetrics and Gynecology (ACOG), Association of State and Territorial Health Officers (ASTHO) and the American Public Health Association (APHA). All vendors must be fully licensed or approved under Medicaid regulations and must be in compliance with any other appropriate state licensing regulations (e.g. day care, special education, etc.). All Title V, and other federal guidelines (such as Title X Family Planning) are monitored as well.

Additionally, standards specific to each program model are included in Requests for Proposals (RFP's). Applicants are judged on their ability to comply with these standards, and those awarded contracts are monitored for continued compliance. Detailed standards were developed and incorporated into RFP's for the following MCH consolidated programs during FFY '82 and FFY '83: Maternal and Infant Care, Children and Youth, Lead Poisoning Prevention, and Adolescent Health and Adolescent Pregnancy.

Quality assurance requirements for both internal and external quality control mechanisms are built into state and federal contracts.

The Division has also been the lead agency in the development and promulgation of updated hospital standards for maternity and pediatric care which provide assurance that all children and mothers hospitalized in the state receive the highest quality care, referral, and discharge planning. The Division participated in writing licensure regulations for birthing centers. A major initiative in FFY '87 will be the development of comprehensive maternity and neonatal care standards and subsequent revision of relevant licensure regulations as appropriate.

505 (2)(B)

RESTRICTIONS OF FUNDS TO PURPOSE OF TITLE V AND PROHIBITION AGAINST DISCRIMINATION

The Commonwealth assures that the funds allocated to it will only be used to carry out the purposes of this Title or to continue activities previously conducted under the consolidated health programs described in Section 502 (B) (1).

The Commonwealth assures that prohibitions against discrimination on the basis of age, handicap, sex, race, color or national origin, and religion consistent with Section 508 of this Title, shall be observed by all programs receiving support.

505 (2)(C)(i)

EXPENDITURE OF SUBSTANTIAL PROPORTION FOR SERVICES AND SPECIAL CONSIDERATION FOR "SPECIAL PROJECTS"

The Commonwealth assures that a substantial proportion of the sums expended under this Title will be used for the provision of health services to mothers and children, with special consideration given where appropriate to the continuation of special projects previously funded under Title V.

Administrative costs for the Division of Family Health Services in FY '87 will be approximately 6% of total state and federal expenditures (or approximately 13% if the WIC budget is not included in the computation). Special consideration has been given to the continuation of those categories of programs previously funded under Title V as the Program of Projects, e.g. Children and Youth Projects, Maternal and Infant Care Projects, and Neonatal Intensive Care Follow-up Projects. Additional state and federal resources have been provided to expand these activities, particularly prenatal care through MIC projects and NICU follow-up.

505 (2)(C)(ii) EXPENDITURE OF REASONABLE PROPORTION OF FUNDS FOR PURPOSES OF ACCESS, PREVENTION, AND SSI-DCP

The Commonwealth assures that a "reasonable" proportion of funds will be expended to achieve those purposes of the MCH Block Grant specified in Section 501 (A) paragraphs (1) to (3), for access, prevention, and the SSI-DCP Programs.

Virtually all of the MCH programs have accesss and prevention objectives including those services which are primarily curative in nature. The SSI-DCP, or Case Management Services Unit, continues to be funded to address the needs of SSI recipients as well as other handicapped children.

505 (2)(D) STATE CHARGES/FINANCIAL ELIGIBILITY

The Commonwealth of Massachusetts assures that any charges imposed for the provision of health services made under this title 1) are pursuant to a public schedule of charges; 2) are not imposed for services to low income mothers and children; and 3) are adjusted for the income, resources, and family size of the individual of family provided the services.

Requirements to this effect were promulgated in 1981 under State Regulations for Determination of Financial Eligibility for Certain Programs Administered by the Division of Family Health Services. (105 CMR 930.000).

Programs provided under contract with the Division either provide services free of charge or on a sliding fee scale basis.

505 (2)(E) INTERAGENCY COORDINATION

The Commonwealth assures that the Maternal and Child Health Services program will participate in coordination of activities with EPSDT under Title XIX to ensure that such programs are carried out without duplication of effort.

A collective working relationship and liaison working group already exist between DFHS and the state EPSDT program. An updated interagency agreement was signed during FFY '83. Recent changes in EPSDT's provider participation and reimbursement mechanisms have necessitated adaptations for our contracted primary care projects and the SSI-DC program. The Division is considering incorporating a requirement of EPSDT participation in its request for proposal process for primary care projects in FFY '87.

All human service agencies, including DFHS, are working with Project Good Health (EPSDT) to increase participation. The Department of Public Welfare's 1984 report, "Increasing Enrollment in Project Good Health," contained a number of recommendations addressing DFHS programs and DFHS will work with Project Good Health to implement these recommendations.

505 (2)(E)(ii) The Commonwealth will participate in the arrangement and carrying out of coordination agreements described in section 502 (A) (ii) relating to coordination of care and services available under this Title and Title XIX.

The Division intends to continue to work with the state Medicaid agency to assure maximum reimbursement from Medicaid for eligible clients receiving services under DFHS programs, and to assure DFHS program compliance with Medicaid rules and regulations. Numerous examples of these activities are described throughout this document, and include recent initiation of Medicaid reimbursement for Early Intervention Services, collaborative efforts to increase physician participation in Medicaid and to improve access to primary health care services, an interagency agreement governing administration of Healthy Start, a state-funded program to pay for maternity care of uninsured pregnant women; and planning to waive deeming rules for handicapped and chronically ill children at risk for institutionalization. Project SERVE also recommends additional cooperative agreements between DFHS and Medicaid regarding financing and quality assurance for services delivered to handicapped children.

505 (2)(E)(iii) The Division will participate in the coordination of activities within the Commonwealth with programs carried out under this Title and related Federal grant programs including supplemental food programs for mothers, infants, and children, related education programs, and other health, developmental disability, and family planning programs.

a. The Division directly administers the statewide WIC program, which is fully integrated structurally as an operational unit of the Division.

b. Along with other state human services agencies within the Commonwealth, the Department of Public Health has sign-off power for regulations regarding special education pursuant to P.L. 94-142 (and corresponding state legislation). It also participates in regional and central Interdepartmental Teams which negotiate services and interagency agreements for hard-to-place multiply handicapped and special needs children.

c. The Departments of Public Health and Education have a longstanding joint sign-off and collaborative relationship as specified in regulations for the preventive child health services of school health assessments and immunizations. Similar relationships exist with the Office for Children, which licenses day care centers, and private residential programs. The Department is also working collaboratively with the Department of Education to develop a comprehensive plan for pre-school services and to ensure appropriate services for chronically ill children in schools.

d. Department staff serve on regional coordinating groups for Title X and Title XX family planning grants, and offer technical assistance and monitoring services.

e. Similar formal and informal working relationships exist and are intended to continue with developmental disabilities, Preventive Health Services Block Grant, community health centers, Health Service Agencies (HSAs), Area Health Education Centers, and other Federal programs. The Division now administers the Rape Crisis services funded through the Preventive Health Services Block Grant. The Division's work with the Massachusetts Rehabilitation Commission (MRC) includes a Task Force on Social Security Administration Disability Program and the MRC Disability Coalition. In response to the recommendations of the Task Force on Prevention of Low Birthweight and Infant Mortality, DFHS will be working with the state Executive Office of Human Services to strengthen regional HSA planning and monitoring of MCH needs and services.

f. The participation of representatives from seven other state agencies that serve children, families, and the disabled as ex-officio members of the Family Health Services Advisory Council allows for information sharing and coordination at the planning stages. These agencies include: Project Good Health (EPSDT), Department of Public Welfare; Developmental Disabilities Council; Office for Children; Department of Youth Services; Department of Social Services; Child-Adolescent Services; Department of Mental Health; and Department of Education.

g. The Division participates in State Executive Office of Human Services (EOHS) interagency Child Health Work Groups focusing on: child health; respite care; child abuse; nursing for the disabled; transitional planning for young (> 22) disabled adults; pediatric nursing homes and the head injured.

h. In FFY'86, the Massachussets Nutrition Board was re-established. This Board provides another vehicle for interagency collaboration. Charged with advising the state on nutrition needs, problems and services, the Board is comprised of 9 gubernatorial appointees and representatives from the following state agencies: Executive Office of Human Services, Department of Food and Agriculture, Office for Children, Department of Mental Health, Department of Public Welfare, Executive Office of Consumer Affairs, Department of Education, and Executive Office of Elder Affairs.

i. A large part of the work of the Women's Health Unit is collaborative in nature. The Unit works with the Governor's Anti-Crime Council in the areas of rape and sexual assault prevention. Programs for women in prison are coordinated with the Department of Corrections. Both the Departments of Public Health and Social Services collaborate on women's health issues, especially in the areas of prevention of sexual abuse and family violence. The Women's Health Program also participates in interagency activities relating to women in the workplace and the particular needs and concerns of women of color.

j. The Division is involved in multiple day care interagency activities, committees and task forces with other Divisions in the Department, the Office for Children, Department of Social Services, day care provider groups and early childhood education professional associations.

505 PUBLIC COMMENT

The Commonwealth assures that the Description of Intended Expenditures and Statement of Assurances will be made public within the Commonwealth in such a manner as to facilitate comment from any person (including any Medical or other public agency) during its development and remain available for public comment after its transmittal. In addition, the Description and Statement shall be revised throughout the year as may be necessary to reflect substantial changes in any element of such description or statement, and any revision will be made public.

As stated in the Family Health Services Advisory Council Charter, the Council has responsibility for: Reviewing, commenting on, and making recommendations regarding this document prior or its transmittal; soliciting input and recommendations on the document from organizations and agencies of which they are members; and providing ongoing advice throughout the year on the need to revise the document.

Additionally, although not required, public hearings are held in order to solicit comments on the draft application. Notices regarding the hearings and the availability of the draft application are publicized in advance through agency newsletters and special mailings. The document is available for review throughout the state at regional health offices and Health Systems Agencies.

VIII. REPORTS AND AUDITS

506 (a) REPORTS ON ACTIVITIES AND EXPENDITURES UNDER THIS TITLE

The Commonwealth of Massachusetts will prepare and submit such reports as required by the Secretary of Human Services in order to provide accurate project descriptions, provide a complete record of funds spent and progress made toward achieving the purpose of Title V and reconcile expenditure of funds with the Description of Intended Expenditures and Statement of Assurances.

Annual reports on the Maternal and Child Health Block Grant Programs have been submitted each year to the Secretary of Health and Human Services. These reports were distributed to the Family Health Services Advisory Council, and are available upon request to any interested party.

506 (b) STATE AUDITS

The Commonwealth of Massachusetts will undertake audits of expenditure of these funds every two years in accordance with Section 506 (b).

506 (c) PUBLIC INSPECTION OF REPORTS

In addition, the Commonwealth will make copies of reports and audits available for public inspection within the state.

IX. DATA COLLECTION ACTIVITIES

1. Current Efforts

Current data collection activities were included in Table 27: "Types of Services to be Provided and Categories or Characteristics of Individuals to be Served". This section describes previous and ongoing data collection efforts under three prototypes: client specific, programmatic and epidemiologic or program evaluation.

- Client specific data ranges from simple demographics to extensive social and medical histories depending on the program. This type of data is usually collected for individuals in programs in which the Division directly provides services.

  In the past few years, the Division has begun to collect client specific information on individuals served in contracted programs. Although many of the individual contracted programs wish to conduct a detailed analysis of their program population, they lack the resources and experience to develop a data system for this purpose. A joint effort between the Division of Family Health Services and the programs will allow the Division to extensively describe the population being served, evaluate the programs, and provide information to both Division and program administrators that would improve the management of programs and the provision of services. Complementing the development of these data systems will be the implementation of improved security procedures aimed at protecting the confidentiality of the information collected.

- Programmatic data is collected on utilization of services and staffing. These consist mostly of reports provided by contracted programs.

- Finally, collection activities of the Division also relate to special epidemiologic investigations or program evaluation. These efforts are aimed at improving our understanding of the factors that influence child health, the population in need of services, the type of services needed, and assessing the impact of these services on the population.

a. Client specific data is maintained for program planning, management, and evaluation. Most of this data is maintained on a protected computer environment.

- WIC has a computerized information system that is used to produce and monitor food package vouchers. This system includes demographic and some program and health status data on individuals served by WIC. The program is developing plans to expand their data system to include more health and outcome data and revise the reports generated by the system.

- The Lead Poisoning Program maintains environmental and medical follow-up data and laboratory testing data and source of testing. The testing data has been recently computerized and listings and statistical reports are generated.

- High Risk Infant Identification Program maintains a data base of all infants who have been identified as being at risk for morbidity or developmental problems statewide. Information collected includes identifiers, health status measures, hospital transfer and discharge planning information.

  Information from the system will be used for the development of criteria and guidelines for the monitoring of health status and diagnosis and treatment of the high risk newborn.

  The data base was also designed for the production of monthly reports which will be utilized to ensure proper follow-up care and for annual statistical reports which will be used for the determination of appropriate programs for early childhood intervention.

- The Hearing Aid Program collects extensive demographic, financial and diagnostic data on children receiving hearing aids under this program.

- The Sudden Infant Death Syndrome Program collects extensive demographic, parental reaction, and medical data on program participants.

- Newborn Screening collects data on cases of approximately 30 inborn errors of metabolism.

- The Psychotropic Drug Program maintains data on children receiving psychotropic drugs, for medical reasons, in schools. The system allows the Division of Family Health Services to keep track of the population receiving these drugs. To protect confidentiality, this system does not maintain the child's name and address in computer.

- The DFHS Handicapped Children's Clinic Program maintains an SHC data base, which includes demographic diagnostic, financial, and referral source data on about 12,000 children served by this program during the past six years.

- The Genetics Program clients are also included in the SHC data base.

- Pediatric Nursing Home residents are included in the SHC data base.

- The Developmental Day, Integrated Preschool, Respite, and Pediatric Nursing Home Programs all use a standard document for collecting data on individuals requesting and receiving these services. This includes demographics, referral source, services requested/provided, current use of resources, functional ability, family data, financial capability, medical history, social history and Core Evaluation.

- The Early Intervention Program has developed and implemented an automated data system for 5,000 clients from 43 contracted programs. Each program records identifying, sociodemographic, medical, diagnostic and service information on all clients accepted into active service. The information will be aggregated monthly, quarterly and yearly statewide and by program and DPH region. Three data collection instruments were developed. Mechanisms to allow cross-referencing with other MCH programs were established. Plans for developing a database that will interface with unit rate contracting information are being developed.

- The Case Management (SSI/DC) Program has a sophisticated information system that maintains data on clients. This includes collection of information from the point of client intake through development of service plans and monitoring of the plans. Data maintained includes demographics, listings of child's disabilities, service needs, service providers, funding sources and purchase of service patterns. In FFY 1986, efforts focused on transferring data files from the mainframe to a personal computer for better accessibility to data. System will be operational in FFY 1987.

- The Hemophilia Program collects a range of data including use of medical services and ability to function.

- The Epilepsy Drug and Rheumatic Fever Program maintains mostly demographic data.

b. Programmatic data collection includes:

- Semi-annual reports from individual contract programs such as Adolescent Health Services, Pregnant and Parenting Adolescents, Preschool Health Services, Developmental Day Programs, Early Intervention Program, Integrated Preschool, Respite Programs, MIC Programs and C&Y Programs.

  These reports include information on utilization, staffing and services provided.

- Handicapped Children Clinic Program produces quarterly clinical attendance reports by clinic type and site on the number of medical encounters, number of admissions and discharges. In addition, an annual report is produced describing the population served and summarizing the data in quarterly clinic attendance reports.

- The Case Management Program produces quarterly reports that examines the quantity of services provided, the characteristics of the client population, and the duration of time between various segments of the service delivery.

- Family Planning Programs utilize a standardized, client specific reporting form that includes such information as age, sex, reason for visit, number of visits, and type of contraceptive used. This data is maintained on a computer system by The John Snow Public Health Group, Inc. and reports are generated on a regular basis.

- The Hearing Aid Program produces an annual report on the number of hearing aids purchased and repaired, as well as describing the population for whom hearing aids are purchased, and the type of aid selected.

- The Psychotropic Drug Program produces an annual report on children who receive psychotropic drugs identified by age, diagnosis, medication, school system, and physician.

- DES (Diethylstilbestrol) Diagnostic Program maintains client data for those women who have utilized DPH certified diagnostic centers. Information collected includes medical findings from the screening examination, sociodemographic data, and amount of DPH reimbursement.

- The Women's Health Program collects data on the Rape and Sexual Abuse Program which includes:

    - A monitoring system for clients of the Rape Crisis Centers funded by DPH. This system provides a data base for the determination of the overall reported incidence of rape, the utilization of medical and legal resources in the community, the sociodemographics of the victim and assailant, and the kinds of consultation provided by the center. A summary report and analysis of data collected from Rape Crisis Centers from January 1984 through June 1985 was completed in early 1986.

  The Women's Health Program is also currently developing an evaluation tool for the assessment of the services which are being provided to women in prison.

c. Epidemiologic and Program Evaluation projects include:

- The development of a computerized data base of natality, mortality, demographic, and socioeconomic (i.e. poverty, unemployment, housing) information on pregnant women and children in Massachusetts began in FY'82. The data base was designed to facilitate the development of more comprehensive needs assessments, the comparison of individuals served to the overall population, and the dissemination of information to health planners, health care providers, and child advocacy groups. Each year this data base is updated with the most current information available. One of the products of this data base will be a report on maternal and child health in Massachusetts.

- Statewide Child Injury Prevention Program: Some of the many data management activities conducted by SCIPP include:

    - monitoring injury fatalities using vital statistics death tapes;

    - monitoring injury morbidity using the uniform Hospital Discharge Data Set;

    - monitoring and evaluating nine local injury prevention projects, funded by the Division.

    - continued analysis and reporting on the Injury Surveillance System (ISS) data base, population-based data on emergency room visits and admissions for injuries;

  - analysis of Pedestrian Data Sets (Fatal Accident Reporting System, Pedestrian Injury Casualty Study, Mass. Department of Public Works Data set and EMS Dispatch data).

  - Key Informant Survey of physicians, legislators, home health agencies academicians, police and fire chiefs, community organizations and other health care providers on attitudes about injuries and accidents;

  - Medical Records Survey of E-coding practices in acute care hospitals;

  - Elementary School Needs Assessment;

  - SCIPP Management Information System.

- Massachusetts Passenger Safety Program conducts a yearly observational study of child and adult restraint usage and attitudes in Massachusetts. These studies collect observational data on the percentage of children and adults restrained, the proper use of restraints, and sociodemographics of the child and driver.

- The Maternal and Infant Care Program computerizes individual non-identifiable data on women in the program in order to better describe the population served by each health center, and determine market shares and success in reducing poor perinatal outcome. This data includes demographics, adequacy of prenatal care, circumstances of delivery, postnatal care, and birth outcome measures.

- The Division conducted a nutrition study to assess how the growth patterns of children in Massachusetts, particularly poor children, compare to established patterns of growth. This study collected sociodemographic information, height, weight, hemoglobin value, hematocrit value, use and change in assistance programs, and nutrition information. Further analysis is being conducted on this data.

- The Massachusetts Adolescent Pregnancy and Parenting Study (MAPPS) in order to better understand the population of adolescents who become parents, to provide appropriate services for them, and to evaluate strategies for reducing future teen pregnancies, has developed and is using a series of instruments aimed at collecting the information needed to meet these objectives. The information includes sociodemographics, prenatal care, birth outcome, maternal health, family support and provider information. The first set of analyses were undertaken in FY '84.

- The Failure to Thrive Program has developed a data system in order to understand the characteristics and needs of the population receiving services, as well as to monitor the amount of services provided and to evaluate outcome measures. At the end of the first year of operation, data from this system were analyzed and a report was released in March 1986. This report provided descriptive characteristics of the children and families served, the amount of services provided and an evaluation of short-term outcome measures.

- The Child Fatality Study collected information from a variety of sources on all children 0-19 years of age who died during calendar year 1985 (Jan. 1, 1985 - Dec. 31, 1985) and who resided in Massachusetts at the time of death. Data processing and analysis was completed in FFY '86, with a report expected in FFY '87. This study has also included a retrospective analysis of all deaths to children 0-19 years of age during a five-year period of calendar years 1980-1984 based exclusively on death certificate data. The purpose of this analysis was to provide a reference for the 1985 study by describing a profile of the studied population.

2. Future Data Management Efforts

The Division's future data management efforts are aimed at:

a. Assessing the need for MCH & SHC services

- This activity includes refinement of statistical methodologies developed by the Division for determining the number of individuals eligible and in need of MCH services. The development of such methodologies for SHC has begun. Unlike many MCH programs, where there are often no alternative sources of services, many SHC services can be obtained in the private sector. However, the geographic distribution and availability of such services to poor populations often prevents access to all needy individuals.

- The Office of Nutrition is developing a statewide nutrition surveillance system to monitor the health and nutritional status of vulnerable population groups. The Massachusetts Nutrition Surveillance System (MNSS) will allow for the regular and timely collection and analysis of data on nutritional risk factors, nutritional status, and nutrition related diseases in the population. The first phase of MNSS will target young children and participants in emergency food programs. Establishment of the MNSS will enable the Office of Nutrition to better identify and tailor services for target groups, develop referral systems, evaluate programs and identify unmet and changing needs for services.

b. Providing information to program administrators that will aid them in improved decision making with respect to service provision.

- The School Health Program staff are developing an information system for monitoring and comparing health related activities of school districts. They also are working on plans for determining the effect of postural screening on the incidence of severe scoliosis in children.

c. Increasing or improving coordination of activities and goals among DFHS programs

- In FFY 1987 efforts will be made to link children with special needs monitored by the High Risk Infant Identification System with the Division's Services for Handicapped Children Programs. One of these programs, The Early Intervention Program will in turn make referrals into services provided by other state agencies. The data system that will be developed for the High-Risk Infant Identification System and the EI System will be used for evaluating the referral process.

d. Engaging in collaborative research to investigate issues that would lead to measures that would improve the health of pregnant women and children

- The Division is conducting a prenatal care survey of 3,000 postpartum women who gave birth in Massachusetts between July and September 1985. The objectives of the survey are to identify barriers to prenatal care utilization and to describe social, demographic and institutional factors associated with utilization. This research will facilitate the planning and implementation of community-based interventions designed to ensure access to early comprehensive and continuous prenatal care particularly for women at high risk for adverse birth outcomes.

Other projects relating to prenatal care include:

- A WIC program evaluation of interventions which seeks to identify, and then to positively influence, a woman's knowledge, attitudes and sources of support for breastfeeding. Identification of interventions that increase the likelihood that a woman will breastfeed and continue to nurse as long as intended will be used to develop a statewide breastfeeding policy for WIC and other MCH programs.

- An evaluation of smoking and birth outcomes among pregnant women in MIC programs, using perinatal log data sets.

8060 044

ACME
BOOKBINDING CO. INC

SEP 6 1990

100 CAMBRIDGE STREET
CHARLESTOWN, MASS.